



BROWN & WILLIAMSON TOBACCO CORPORATION
DEPARTMENT NAME

RESTRICTED

PGS-B000-91

1990 DUPONT SENSORY MAPPING OF DOMESTIC MENTHOL BRANDS

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(Date)
Project ###

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MANAGEMENT ABSTRACT

Dupont panelists evaluated 72 menthol brands on nine attributes. The tests were designed so KS smokers evaluated only KS products and 100's smokers evaluated only 100's products to produce four composite maps.

The following smokers evaluated full flavor and low delivery products:

104 Full Flavor, Menthol KS
112 Full Flavor, Menthol 100

Low delivery and ultra products were evaluated by the following smokers:

77 Low Delivery, Menthol KS
98 Low Delivery, Menthol 100

The brands ranged in tar delivery from 1 to 19 milligrams and the menthol levels from 0.34 to 1.88%.

Major findings show:

1. FULL FLAVOR/LOW DELIVERY, MENTHOL KS

B&W and Lorillard products are similar in strength and menthol/tobacco balance. This is the same trend we saw in the 1989 Menthol Mapping study. For the most part, both B&W and Lorillard products are mid-range in strength and have more tobacco taste than menthol taste with the exception of KOOL DELUXE LTS KS, BELAIR KS (VFM) and BELAIR Lts KS (VFM) which tend to be more similar to PM and RJR in the fact that they have more menthol taste than tobacco taste.

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Philip Morris and R.J. Reynolds are similar in strength and menthol/tobacco balance. Their products tend to be mid-range in strength and have more menthol taste than tobacco taste. Again, this was the same trend that was seen in the 1989 Menthol Mapping Study.

Both RICHLAND KS and KOOL KS are perceived as stronger products with more tobacco taste than menthol taste.

2. LOW DELIVERY/ULTRA LOW DELIVERY, MENTHOL KS

Again, B&W and Lorillard products tend to be similar. Both have more tobacco than menthol taste except for BELAIR LTS KS (VFM) and KOOL DELUXE LTS KS which tend to be similar to PM and RJR. They are perceived to have more menthol than tobacco taste.

Philip Morris and R.J. Reynolds products are similar. They tend to be mid-range in strength and have more menthol than tobacco taste.

Merit Lts KS and Now KS are perceived as weaker products than the others tested with the exception of Carlton KS which is perceived as the weakest product.

3. FULL FLAVOR/LOW DELIVERY, MENTHOL 100

Once again we see the same pattern with the B&W and Lorillard products. Both are similar in strength and menthol/tobacco balance. There is a distinction between the full flavor and low delivery products in strength and all tend to have more tobacco than menthol taste. KOOL DELUXE LTS 100 tends to be similar to PM and RJR because it is perceived as having more menthol than tobacco taste.

Philip Morris and R.J. Reynolds products also continue to be similar in strength and menthol/tobacco balance. They tend to be mid-range in strength and have more menthol than tobacco taste.

4. LOW DELIVERY/ULTRA LOW DELIVERY, MENTHOL 100

B&W and Lorillard products are, again, similar in strength and menthol/tobacco balance, mid-range in strength and more tobacco than menthol taste. And again, KOOL DELUXE LTS 100, KOOL DELUXE ULTRA 100 and BELAIR LTS 100 (VFM) are similar to PM and RJR because they are perceived as having more menthol than tobacco taste.

Philip Morris and R.J. Reynolds products are similar in strength and menthol/tobacco balance. They run the full range in strength and have more menthol than tobacco taste.

Virginia Slims Lts 100 and Newport Lts 100 are perceived as weaker products than the ultras in this study with the exception of Carlton 100 which is perceived as the weakest product.

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TEST DETAILS

Smokers of KS and 100, full flavor and low delivery products from six manufacturers participated on the panels. Panel and demographic breakdowns for each test are included in Appendix D.

Each panel was divided into two groups and a modified Latin Square test design was used to balance the sample presentation. Each smoker group evaluated products at their tar level first, then returned to evaluate the products at the lower tar level. For example, FF-M KS smokers evaluated FF-M KS products in the first test and evaluated the LD-M products in the second test.

Using a nine-point scale (Appendix E), the panelists did replicated monadic ratings on the following attributes:

	<u> Anchors </u>	
Draw	Easy	Hard
Mouthful of Smoke	A Little	A Lot
Impact	A Little	A Lot
Irritation	A Little	A Lot
Tobacco Taste	A Little	A Lot
Menthol Taste	A Little	A Lot
Cooling Effect	A Little	A Lot
Tob/Men Balance	Mainly Tobacco	Mainly Menthol
Aftertaste	A Little	A Lot

The panels evaluated between 22 and 30 (Figure 1) brands. The brands were manufactured by Brown & Williamson, Philip Morris, R.J. Reynolds, Liggett & Myers, Lorillard, and American Tobacco.

The menthol mapping study began September 13, 1990 and ended November 9, 1990. The panelists' fees for this project totaled \$71,805. All products in this study were purchased and are normal production with the exception of the KOOL DELUXE styles and GPC FF-M 100 which came directly from Macon. The cost of the cigarettes was approximately \$4,200.

The Dupont Study I.D.'s were 900231, 900238, 900241, 900245, 900246, 900247, 900248, and 900249.

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DATA ANALYSIS

Data from each panelist was screened for consistency using an analysis of variance procedure with a discard level of $PR > 0.400$. Therefore, data from 45 to 89% of the panelists were retained for further analysis. The results from these panelists were analyzed again using the analysis of variance procedure and Duncan's Multiple Range Test. The results of the Duncan's Multiple Range Test for both screened and unscreened data are presented in Appendix C.

The screened data were then evaluated using Factor Analysis. The factor scores for each product were plotted to produce the maps. Results of each factor analysis are presented in Appendix B. Individual maps for each test are included in Appendix A.

After analyses of all test were completed, results of common smoker groups were merged. The data were re-analyzed using the Analysis of Variance, Duncan's Multiple Range, and Factor Analysis procedures. The Factor Scores from the Factor Analysis were also used in a Cluster Analysis. The purpose of a Cluster Analysis is to see if there is a tendency for products to group together, based on data. The following maps were produced:

FULL FLAVOR and LOW DELIVERY, MENTHOL KS PRODUCTS BY
FULL FLAVOR, MENTHOL KS SMOKERS

LOW DELIVERY and ULTRA LOW DELIVERY, MENTHOL KS PRODUCTS BY
LOW DELIVERY, MENTHOL KS SMOKERS

FULL FLAVOR and LOW DELIVERY, MENTHOL 100 PRODUCTS BY
FULL FLAVOR, MENTHOL 100 SMOKERS

LOW DELIVERY and ULTRA LOW DELIVERY, MENTHOL 100 PRODUCTS BY
LOW DELIVERY, MENTHOL 100 SMOKERS

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RESULTS

A two-dimensional plot was generated for each of the four maps using the "Strength" and "Taste" characteristics. Draw and Mouthful of Smoke data were obtained for informational purposes and were not included in the factor analysis. Impact, Irritation, and Aftertaste make up the "Strength" characteristic while Tobacco Taste, Menthol Taste, Cooling Effect and Menthol/Tobacco balance were included in the "Taste" characteristic. The factor loadings, explained variance, and factor scores follow the composite maps.

MENTHOL/TOBACCO BALANCE

Results from the maps show:

1. BROWN & WILLIAMSON

Products tend to have more tobacco than menthol taste. BELAIR KS (VFM) & LTS KS (VFM), KOOL DELUXE LTS KS, ~~BELAIR LTS 100 (VFM)~~, and KOOL DELUXE LTS 100 & ULTRA 100 are the exceptions; they are more similar to PM and RJR because they tend to have more menthol than tobacco taste.

2. PHILIP MORRIS

Products tend to have more menthol than tobacco taste. Alpine KS and Marlboro KS tend to have a balance of menthol and tobacco taste.

3. R. J. REYNOLDS

Products tend to have more menthol than tobacco taste. Vantage Lts KS and Doral 100 are the exception: they tend to have more tobacco than menthol taste.

4. LIGGETT & MYERS

The Pyramid styles tested are similar to B&W and Lorillard. They tend to have more tobacco than menthol taste.

5. LORILLARD

Products tend to have more tobacco than menthol taste.

6. AMERICAN

Products tend to run the full range of menthol/tobacco balance.

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STRENGTH

Results from the maps show:

1. BROWN & WILLIAMSON

KOOL KS and RICHLAND KS are perceived as stronger products than the other B&W full flavor KS products tested.

Full flavor, menthol 100 smokers perceived BELAIR 100 (VFM) as a weaker product than other B&W full flavor 100 products tested.

2. PHILIP MORRIS

Full flavor, menthol KS smokers found Bristol Lts KS to be a stronger product than other PM full flavor and low delivery products tested.

Low delivery, menthol KS smokers found Merit Lts KS to have less strength than Merit Ultra Lts KS and other PM low delivery KS products tested.

Virginia Slims Lts 100 was perceived to have less strength than the other PM low delivery 100 and ultra low delivery products tested.

Cambridge Lts 100 was perceived to be a stronger product than the other PM low delivery 100 products tested.

3. R.J. REYNOLDS *Full flavor, menthol KS smokers found Doral Lts KS to be stronger than other full flavor and low delivery KS products tested.*

Full flavor, menthol 100 smokers found Doral 100 to be the strongest among all other full flavor and low delivery 100 products tested.

Low delivery, menthol 100 smokers perceived Century Lts 100 to be stronger than all other low delivery and ultra low delivery products tested.

4. LIGGETT & MYERS

The Pyramid styles tend to be similar to other B&W and Lorillard products in strength.

5. LORILLARD

Newport tends to be similar to KOOL and RICHLAND in strength.

Newport Lts tend to be similar to KOOL Lts and BELAIR in strength.

6. AMERICAN

Carlton KS is perceived as the weakest product tested.

Carlton 100 is comparable to some of the other ultra products tested as well as some of the low delivery products tested.

Malibu KS is comparable to some of the other full flavor products tested.

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FIGURE 1

MENTHOL

CIGARETTES EVALUATED

FULL FLAVOR KS PANEL

ALPINE KS
BELAIR FF KS (VFM)
DORAL KS
KOOL KS
MALIBU KS
MARLBORO KS
NEWPORT KS
PLAYERS KS
PYRAMID KS
RICHLAND KS
SALEM KS
GPC-GENERIC FF-M KS

FULL FLAVOR 100 PANEL

ALPINE 100
B&H 100
BELAIR 100 (VFM)
DORAL 100
KOOL 100
NEWPORT 100
PLAYERS 100
PYRAMID 100
RICHLAND 100
SALEM 100
GPC-GENERIC FF-M 100
VA. SLIMS 100

4

ALPINE LTS KS
BELAIR LTS KS (VFM)
BELAIR KS
BRISTOL LTS KS
CAMBRIDGE LTS KS
DORAL LTS KS
KENT GOLDEN LTS KS
KOOL MILDS KS
KOOL LTS KS
KOOL DELUXE LTS KS
MARLBORO LTS KS
MERIT KS
NEWPORT LTS KS
VANTAGE LTS KS
SALEM LTS KS
GPC-GENERIC LD-M KS

ALPINE LTS 100
B&H LTS 100
BELAIR 100
BELAIR LTS 100 (VFM)
BRISTOL LTS 100
CAMBRIDGE LTS 100
CENTURY LTS 100
DORAL LTS 100
KOOL MILDS 100
KOOL LTS 100
KOOL DELUXE LTS 100
MARLBORO LTS 100
MERIT 100
NEWPORT LTS 100
PYRAMID LTS 100
SALEM LTS 100
VA. SLIMS LTS 100
GPC-GENERIC LD-M 100

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FIGURE 1 (cont.)

MENTHOL

CIGARETTES EVALUATED

LOW DELIVERY KS PANEL

ALPINE LTS KS
BELAIR KS
BELAIR LTS KS (VFM)
BRISTOL LTS KS
CAMBRIDGE LTS KS
DORAL LTS KS
KENT GOLDEN LTS KS
KOOL MILDS KS
KOOL LTS KS
KOOL DELUXE LTS KS
MARLBORO LTS KS
MERIT KS
NEWPORT LTS KS
SALEM LTS KS
VANTAGE LTS KS
GPC-GENERIC LD-M KS

CARLTON KS
KOOL DELUXE ULTRA LTS KS
MERIT ULTRA LTS KS
NOW KS
SALEM ULTRA LTS KS
TRUE KS

LOW DELIVERY 100 PANEL

ALPINE LTS 100
B&H LTS 100
BELAIR 100
BELAIR LTS 100 (VFM)
BRISTOL LTS 100
CAMBRIDGE LTS 100
CENTURY LTS 100
DORAL LTS 100
KOOL MILDS 100
KOOL LTS 100
KOOL DELUXE LTS 100
MARLBORO LTS 100
MERIT LTS 100
NEWPORT LTS 100
PYRAMID LTS 100
SALEM LTS 100
VA. SLIMS LTS 100
GPC-GENERIC LD-M 100

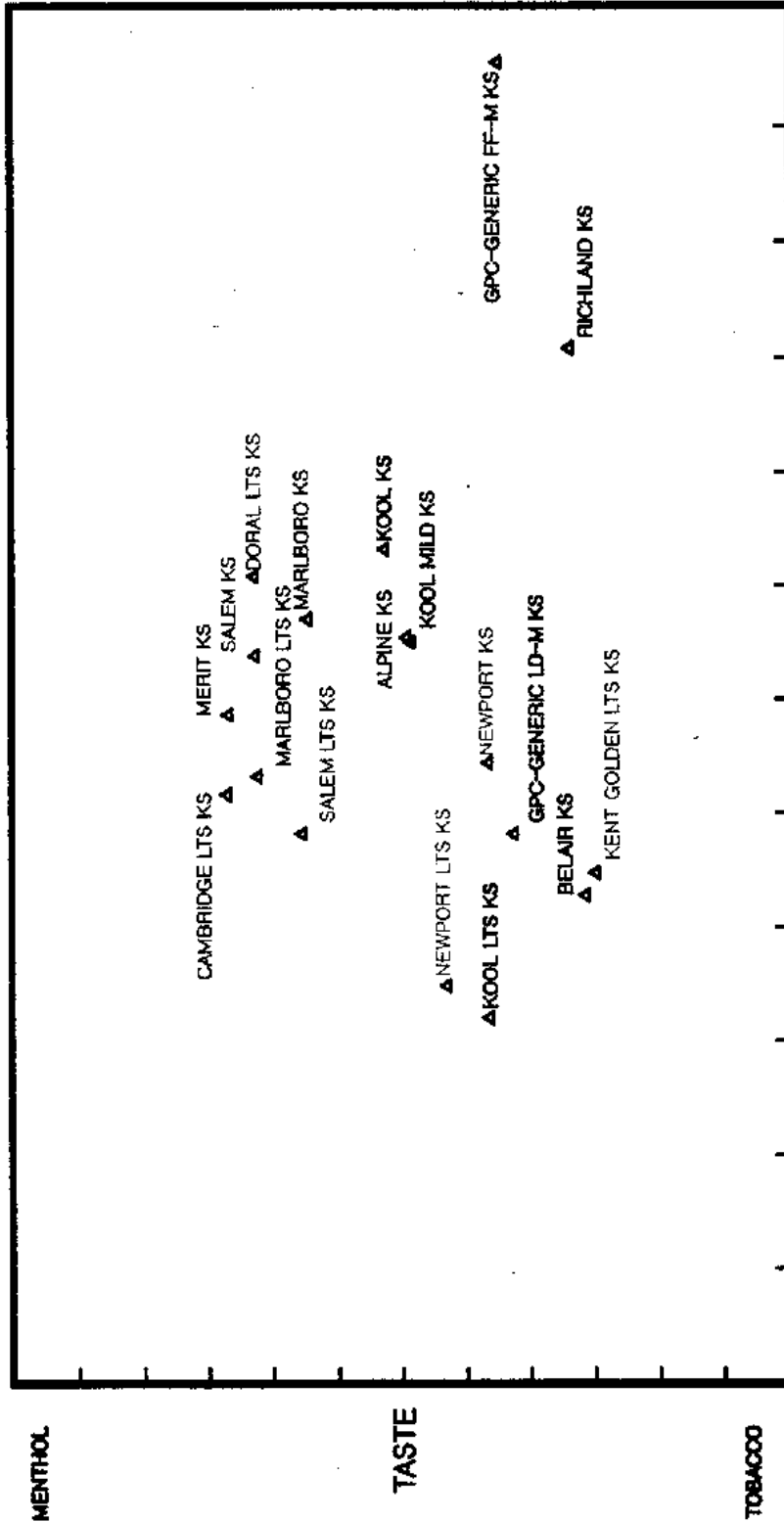
B&H DELUXE UL LTS 100
CARLTON 100
KOOL DELUXE UL LTS 100
MERIT ULTRA LTS 100
NOW 100
SALEM ULTRA LTS 100
VA. SLIMS ULTRA 100
TRIUMPH ULTRA LTS 100

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FULL FLAVOR/LOW DELIVERY, MENTHOL KS

FULL FLAVOR, MENTHOL KS SMOKERS

BAW
PM
FJR
LOR



MENTHOL

TASTE

TOBACCO

LESS

MORE

STRENGTH

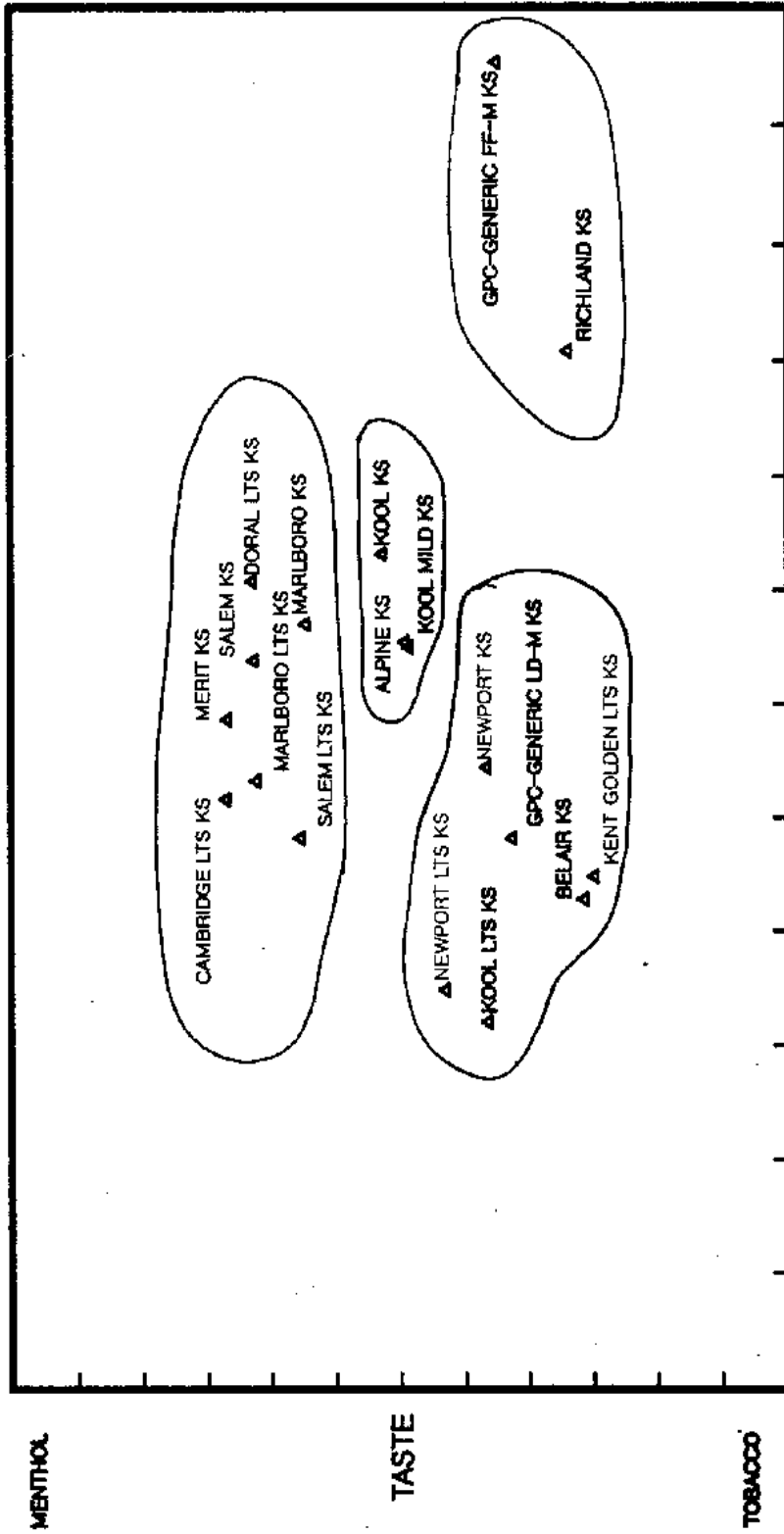
2005/3/01

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FULL FLAVOR/LOW DELIVERY, MENTHOL KS

FULL FLAVOR, MENTHOL KS SMOKERS

BAW
PM
RJR
LOR

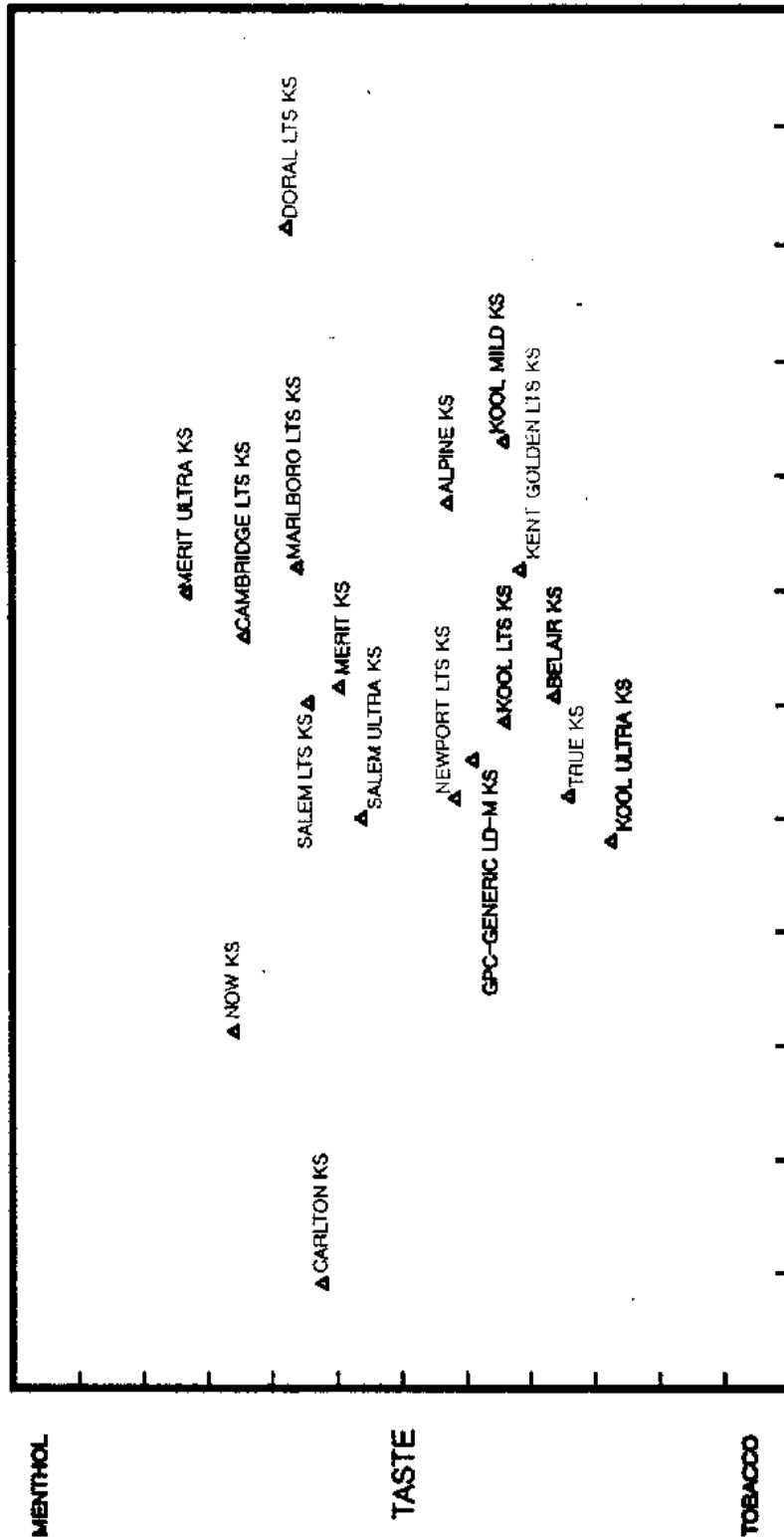


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LOW DELIVERY/ULTRA LOW DELIVERY, MENTHOL KS
 LOW DELIVERY, MENTHOL KS SMOKERS

8AM
 PM
 5PM
 4PM
 AM



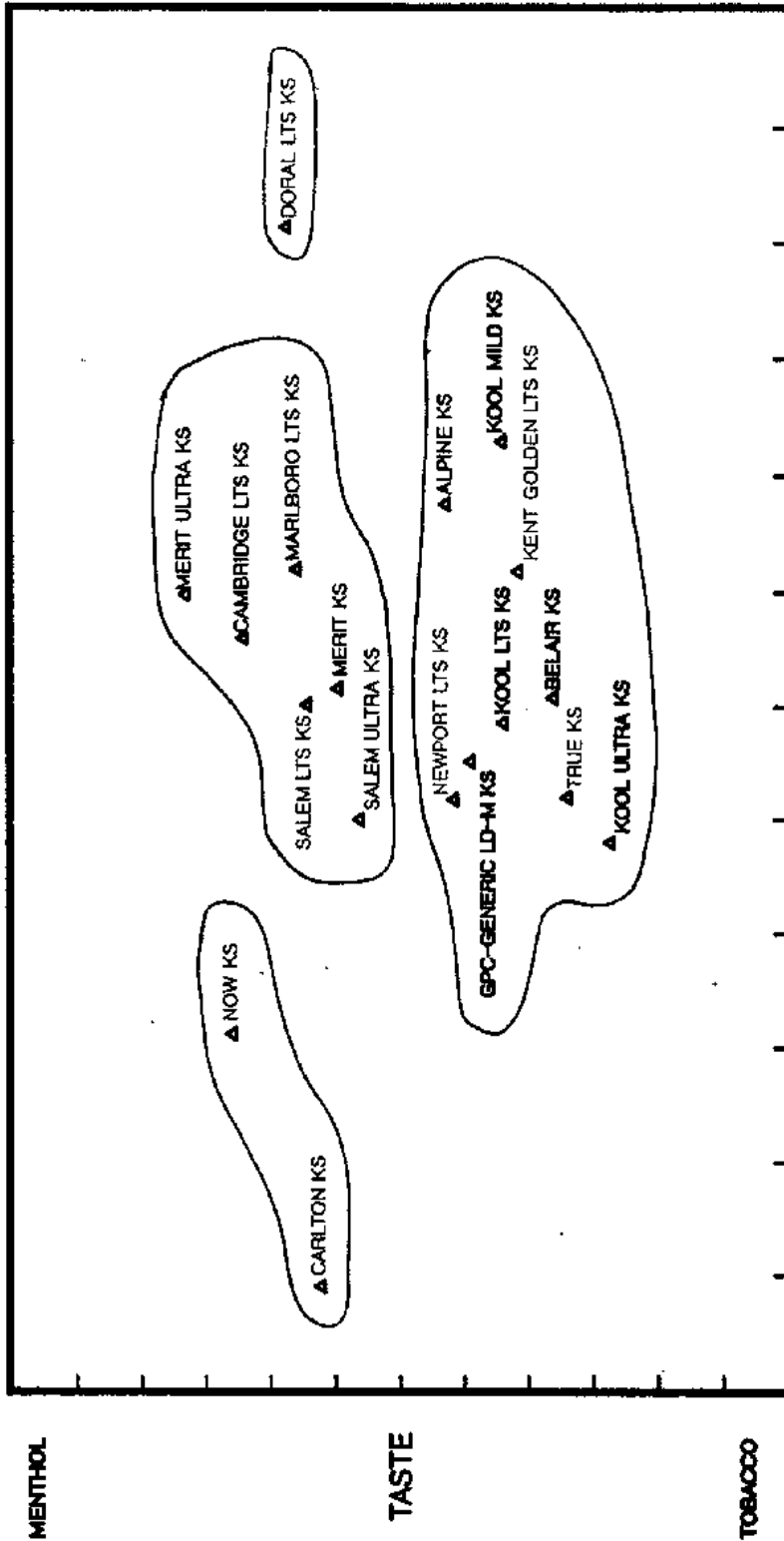
620944596

48290251

LOW DELIVERY/ULTRA LOW DELIVERY, MENTHOL KS

LOW DELIVERY, MENTHOL KS SMOKERS

BSW
 PM
 RJR
 LOR
 AM



MORE

STRENGTH

LESS

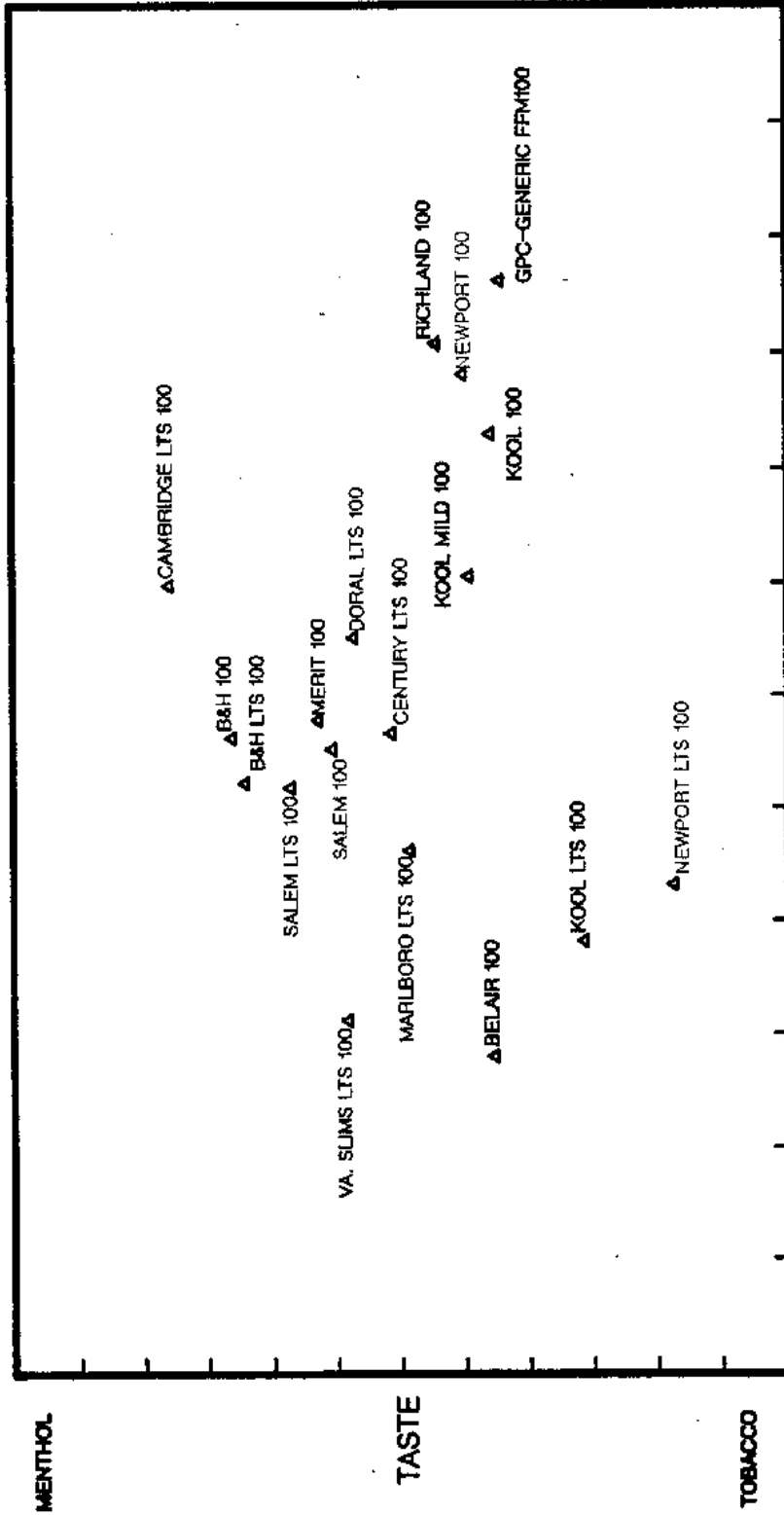
TOBACCO

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FULL FLAVOR/LOW DELIVERY, MENTHOL 100

FULL FLAVOR, MENTHOL 100 SMOKERS

B&W
PM
RJR
LOR

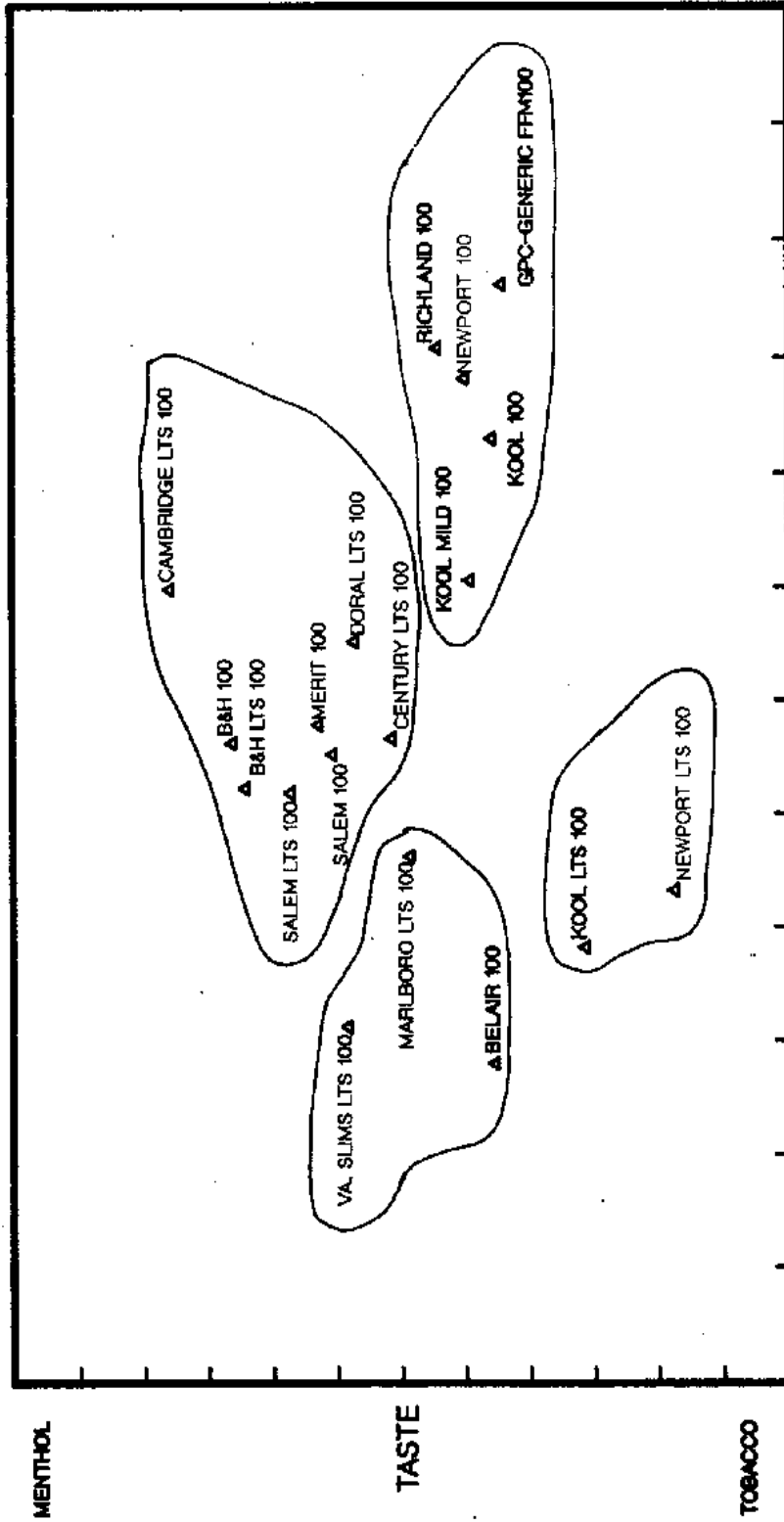


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SCIENCE

FULL FLAVOR/LOW DELIVERY, MENTHOL 100
 FULL FLAVOR, MENTHOL 100 SMOKERS

BMW
 FM
 RJR
 LOR



MORE

STRENGTH

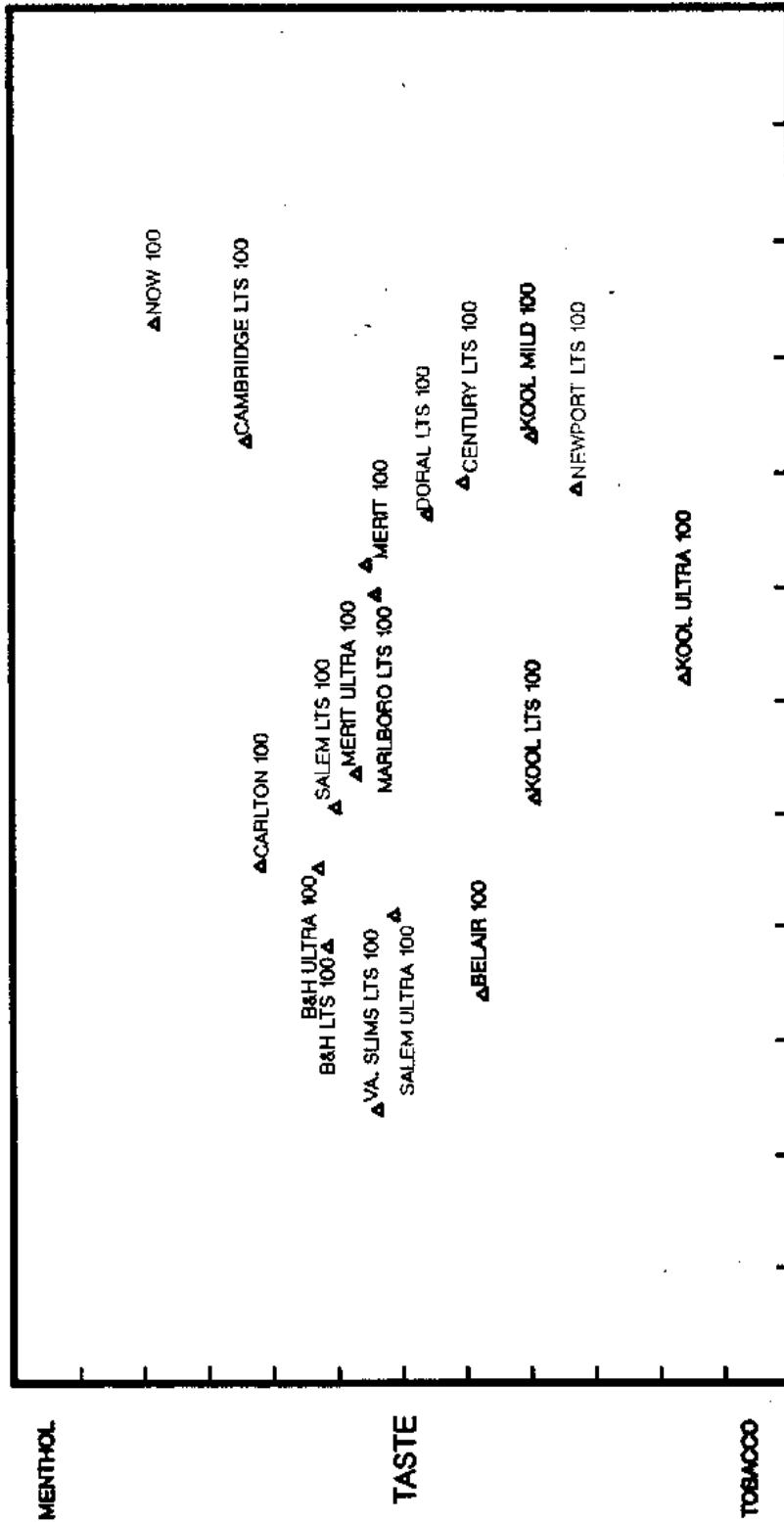
LESS

TOBACCO

LOW DELIVERY/ULTRA LOW DELIVERY, MENTHOL 100

LOW DELIVERY, MENTHOL 100 SMOKERS

BAW
PM
FJR
LOR
AM



MORE

STRENGTH

LESS

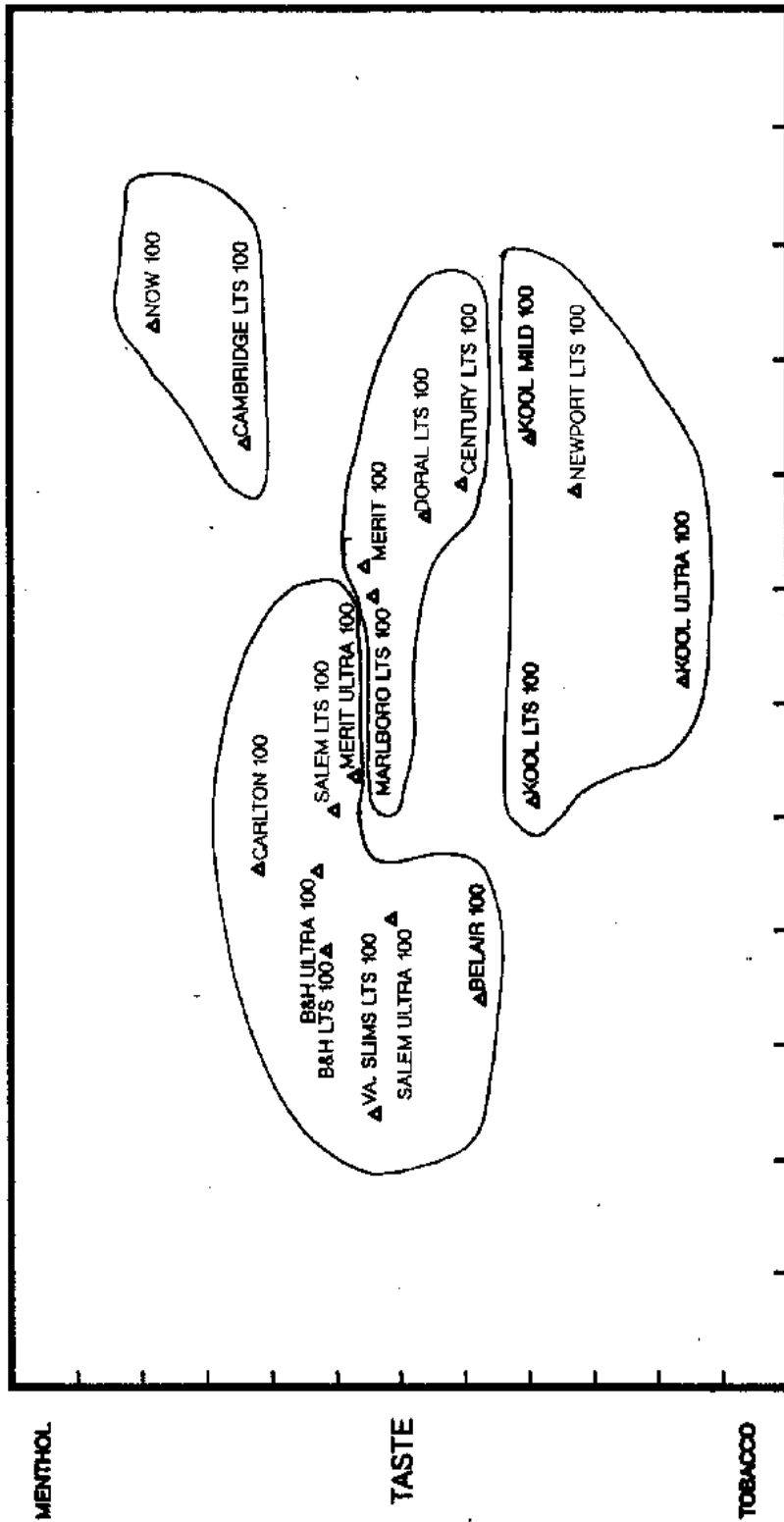
REVERSE

620944600

LOW DELIVERY/ULTRA LOW DELIVERY, MENTHOL 100

LOW DELIVERY, MENTHOL 100 SMOKERS

BAW
 PM
 RJR
 LOR
 AM



620944601

88217021

APPENDIX A

INDIVIDUAL MAPS

620944602

FULL FLAVOR, MENTHOL KS

900231

MENTHOL

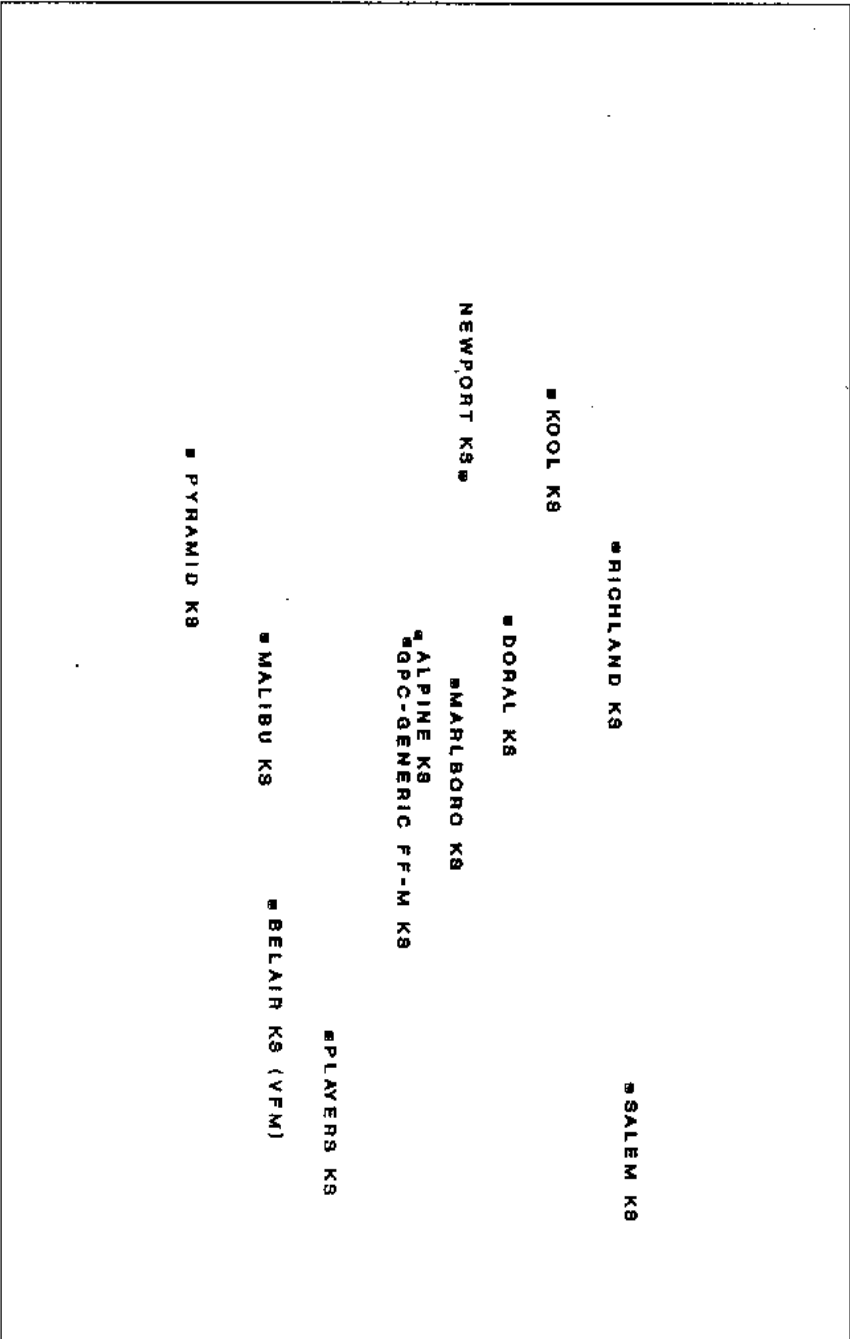
TASTE

TOBACCO

LESS

STRENGTH

MORE



■ RICHLAND KS

■ SALEM KS

■ KOOL KS

■ DORAL KS

■ NEWPORT KS

■ MARLBORO KS

■ ALPINE KS
■ GPC-GENERIC FF-M KS

■ PLAYERS KS

■ MALIBU KS

■ BELAIR KS (VFM)

■ PYRAMID KS

620944603

LOW DELIVERY, MENTHOL KS 900241

MENTHOL

TASTE

TOBACCO

* MERIT LTS KS	* CAMBRIDGE LTS KS	* DORAL LTS KS
* MARLBORO LTS KS	* KOOL DELUXE LTS KS	
	BELAIR LTS KS (VFM) * SALEM LTS KS	
	* ALPINE LTS KS	* BRISTOL LTS KS
* KENT GOLDEN LTS KS		
* NEWPORT LTS KS		
* KOOL MILDS KS		
* VANTAGE LTS KS	* BELAIR LTS KS	* GPC-GENERIC LO-M KS
* KOOL LTS KS		

LESS

STRENGTH

MORE

620944605

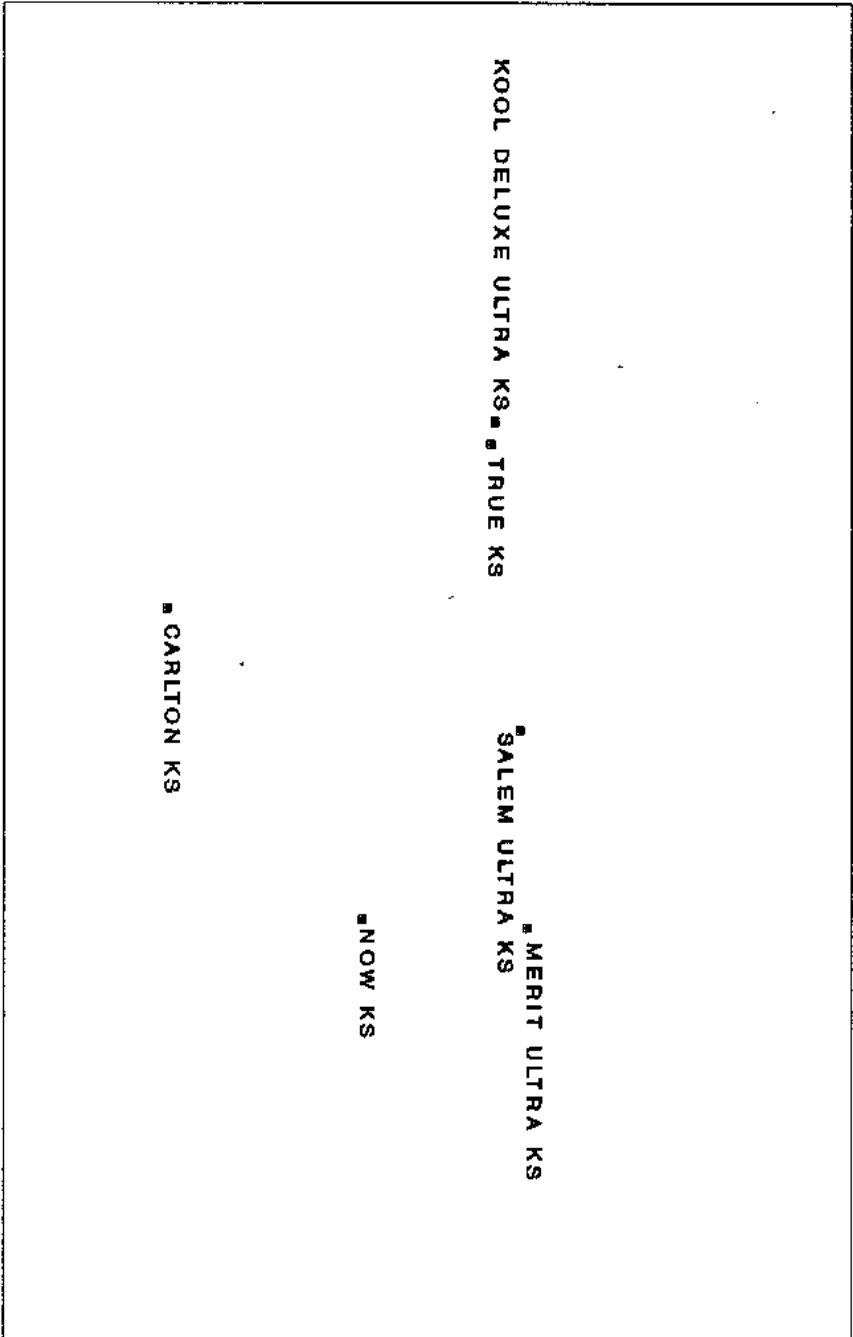
ULTRA LOW DELIVERY, MENTHOL KS

900245

MENTHOL

TASTE

TOBACCO



• KOOL DELUXE ULTRA KS

• SALEM ULTRA KS

• MERIT ULTRA KS

• NOW KS

• CARLTON KS

LESS

STRENGTH

MORE

620944606

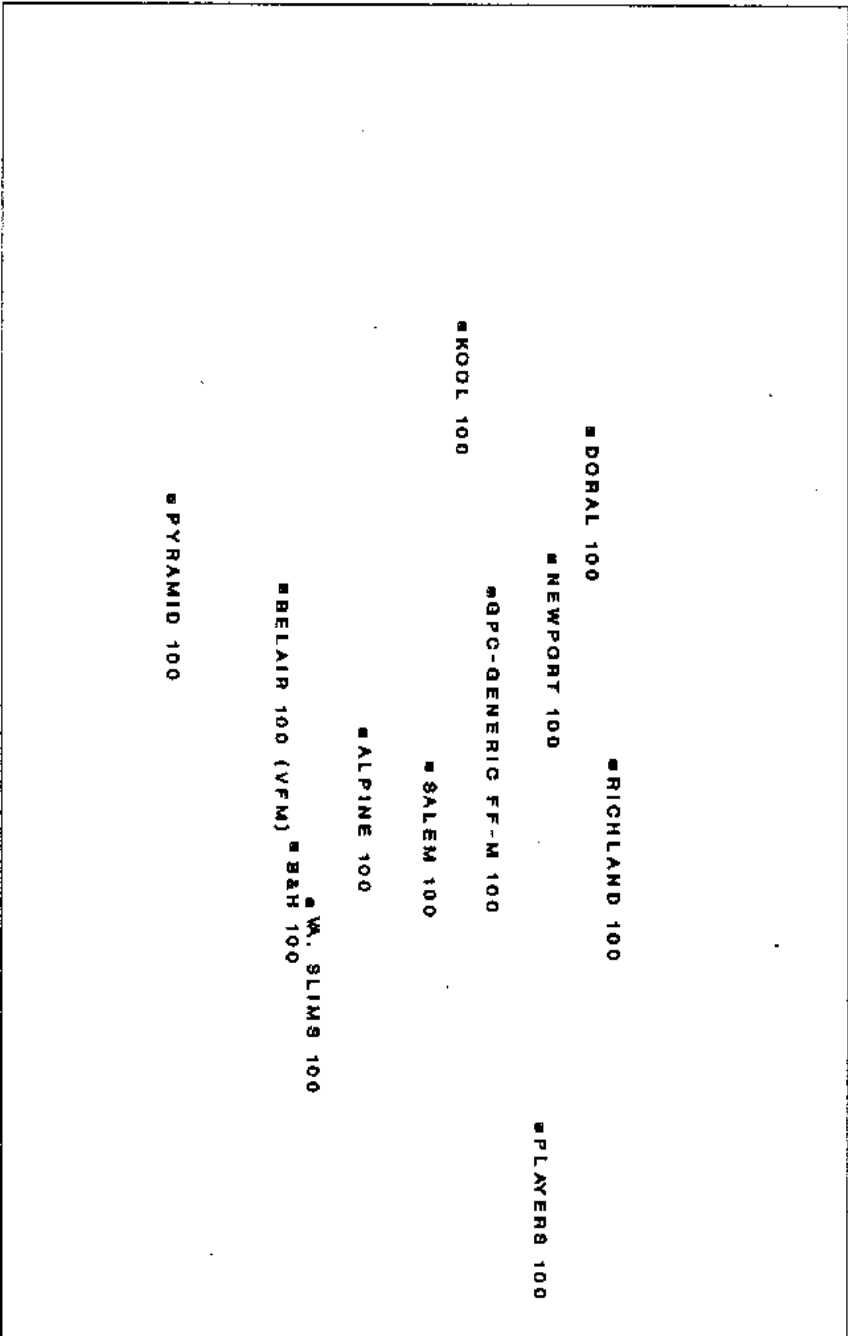
FULL FLAVOR, MENTHOL 100

900246

MENTHOL

TASTE

TOBACCO



LESS

STRENGTH

MORE

620944607

LOW DELIVERY, MENTHOL 100

900247

MENTHOL

TASTE

TOBACCO

VA. SLIMS LTR 100	■ B&W LTR 100	■ CAMBRIDGE LTR 100
	■ KOOL DELUXE LTR 100	
SALEM LTR 100	■ ALPINE LTR 100	■ DORAL LTR 100
BELAIR LTR 100 (VFM)	■ MERIT LTR 100	
MARLBORO LTR 100	■ BRISTOL LTR 100	■ CENTURY LTR 100
		■ KOOL MILDS 100
GPC-GENERIC LD-M 100	■ PYRAMID LTR 100	
	■ KOOL LTR 100	
	■ BELAIR LTR 100	
	■ NEWPORT LTR 100	

LESS

STRENGTH

MORE

620944608

LOW DELIVERY, MENTHOL 100

900248

MENTHOL

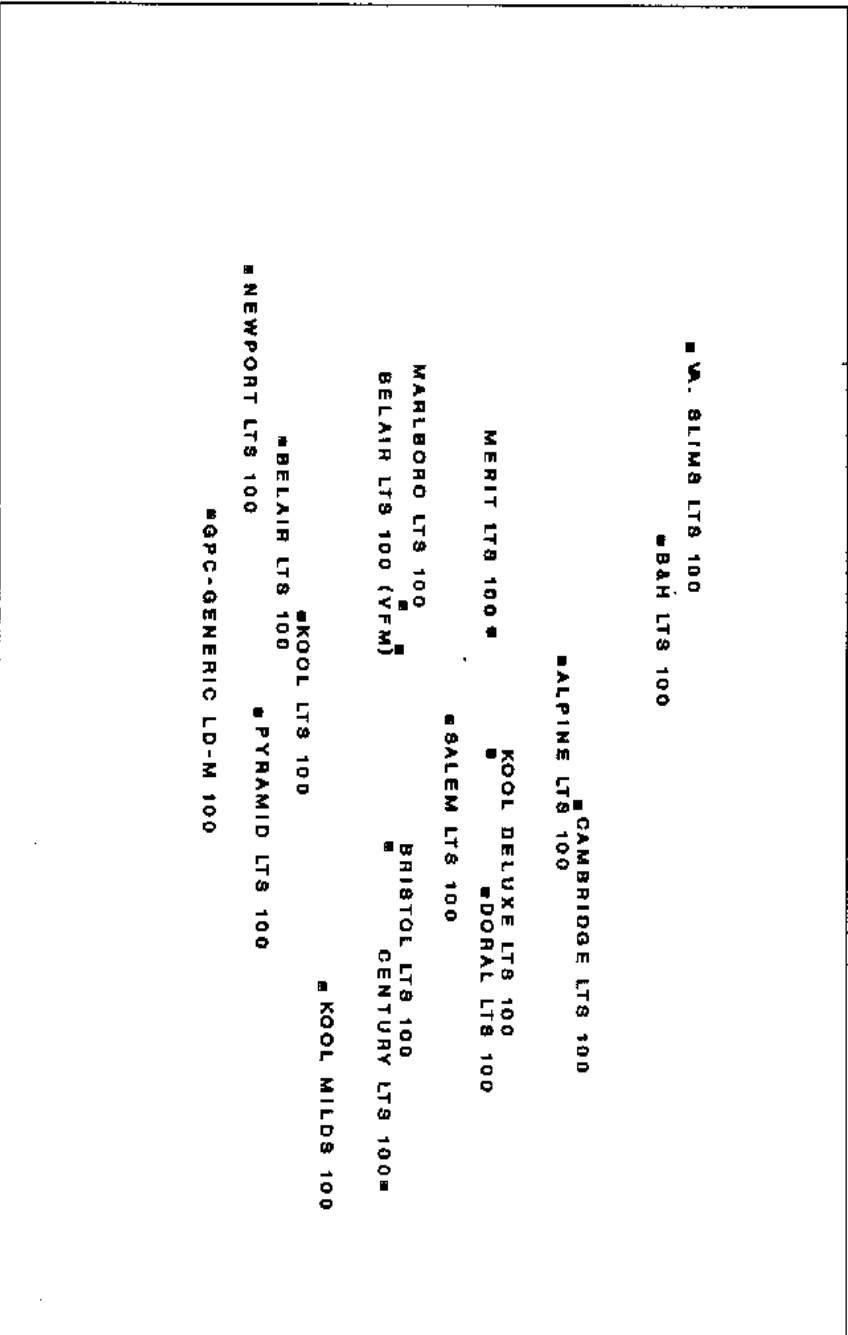
TASTE

TOBACCO

LESS

STRENGTH

MORE



■ V. SLIMS LTS 100
■ B&W LTS 100

■ ALPINE LTS 100 ■ CAMBRIDGE LTS 100

MERIT LTS 100 ■ ■ KOOL DELUXE LTS 100
■ DORAL LTS 100

■ SALEM LTS 100

MARLBORO LTS 100 ■ ■ BRISTOL LTS 100
BELAIR LTS 100 (VFM) ■ ■ CENTURY LTS 100 ■

■ KOOL LTS 100 ■ KOOL MILDS 100

■ BELAIR LTS 100 ■ PYRAMID LTS 100
■ NEWPORT LTS 100

■ GPC-GENERIC LD-M 100

620944609

ULTRA LOW DELIVERY, MENTHOL 100

900249

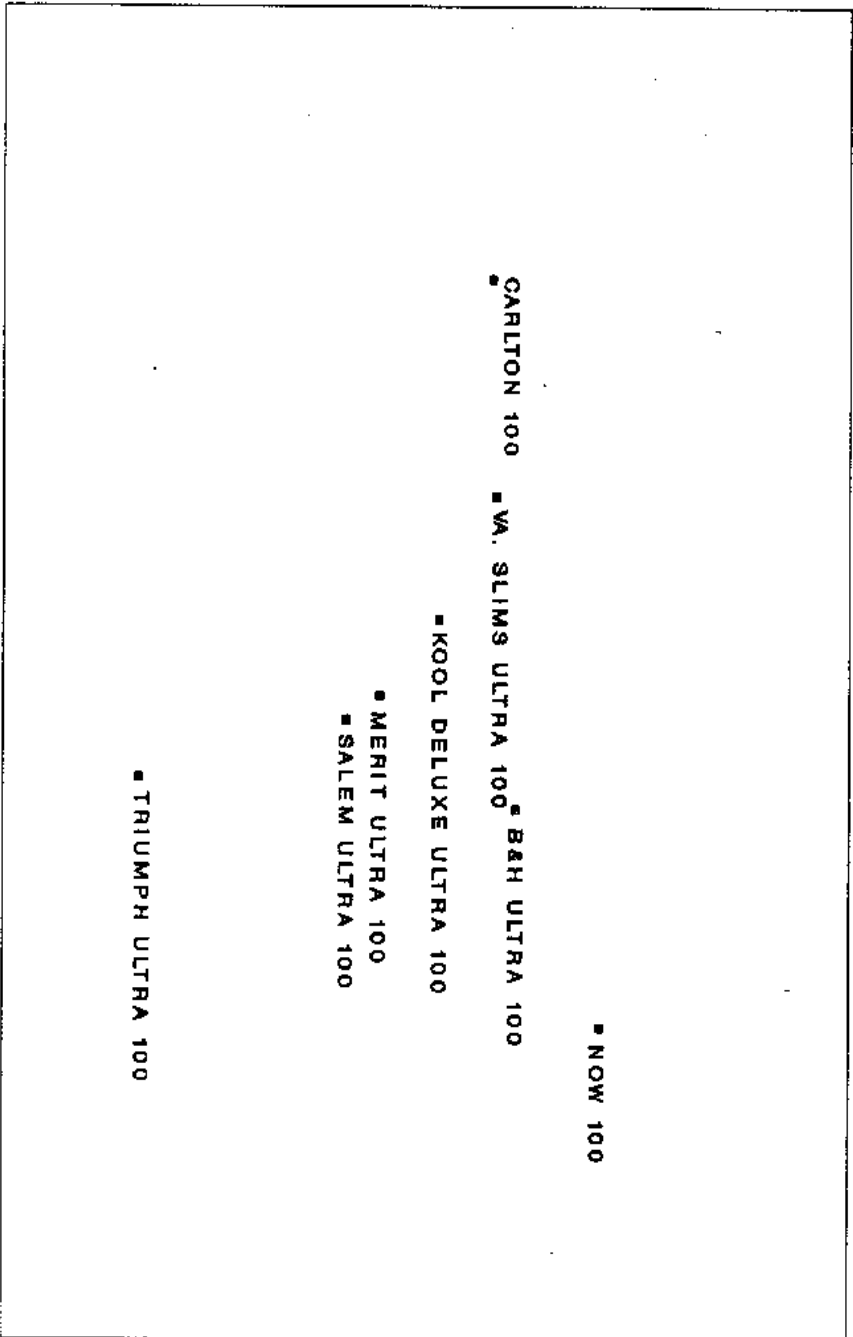
MENTHOL

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TASTE

TOBACCO

LESS



STRENGTH

MORE

APPENDIX B

FACTOR ANALYSIS RESULTS

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Factor Analysis

Study I.D.: 900241
Products : Low Delivery, Menthol KS
Smokers : Low Delivery, Menthol KS

Factor Loadings

	<u>Factor 1</u>	<u>Factor 2</u>
Impact	0.27	0.93
Irritation	0.13	0.95
Tobacco Taste	-0.92	0.27
Menthol Taste	0.96	0.25
Cooling Effect	0.97	0.19
Tobacco/Menthol Balance	0.97	0.13
Aftertaste	-0.12	0.85
Variance Explained By Each Factor:	54%	38%
Total Variance Explained:	92%	

Factor Scores

<u>Product</u>	<u>Factor 1</u>	<u>Factor 2</u>
Alpine Lts KS	0.28	0.17
BELAIR Lts KS	-1.29	0.54
BELAIR Lts KS (VFM)	0.66	0.15
Bristol Lts KS (M)	-0.10	1.29
Cambridge Lts KS (M)	1.67	0.14
Doral Lts KS (M)	1.19	1.89
GPC-Generic Lts KS (M)	-1.06	1.25
Kent Golden Lts KS (M)	-0.60	-1.09
KOOL DELUXE Lts KS	0.82	-0.40
KOOL Lts KS	-0.80	-1.36
KOOL MILDS KS	-0.99	0.73
Marlboro Lts KS (M)	0.33	-0.54
Merit Lts KS (M)	1.40	-1.73
Newport Lts KS	-0.80	-0.63
Salem Lts KS	0.63	0.21
Vantage Lts KS (M)	-1.32	-0.62

Factor Analysis

Study I.D.: 900245
Products : Ultra Low Delivery, Menthol KS
Smokers : Low Delivery, Menthol KS

Factor Loadings

	<u>Factor 1</u>	<u>Factor 2</u>
Impact	0.96	0.23
Irritation	0.95	0.26
Tobacco Taste	0.79	-0.61
Menthol Taste	0.18	0.98
Cooling Effect	0.24	0.97
Tobacco/Menthol Balance	-0.02	1.00
Aftertaste	0.98	0.07
Variance Explained By Each Factor:	50%	49%
Total Variance Explained:	99%	

Factor Scores

<u>Product</u>	<u>Factor 1</u>	<u>Factor 2</u>
Carlton Ultra Lts KS (M)	-1.85	-0.30
KOOL DELUXE Ultra Lts KS	0.45	-1.04
Merit Ultra Lts KS (M)	0.71	1.13
Now Ultra Lts KS (M)	-0.46	1.09
Salem Ultra Lts KS	0.66	0.25
True Ultra Lts KS (M)	0.48	-1.14

Factor Analysis

Study I.D.: 900246
Products : Full Flavor, Menthol 100
Smokers : Full Flavor, Menthol 100

Factor Loadings

	<u>Factor 1</u>	<u>Factor 2</u>
Impact	0.99	-0.10
Irritation	0.96	-0.25
Tobacco Taste	0.84	-0.53
Menthol Taste	-0.31	0.94
Cooling Effect	-0.08	0.99
Tobacco/Menthol Balance	-0.51	0.85
Aftertaste	0.92	-0.34
Variance Explained By Each Factor:	54%	44%
Total Variance Explained:	98%	

Factor Scores

<u>Product</u>	<u>Factor 1</u>	<u>Factor 2</u>
Alpine 100 (M)	-0.44	0.25
Benson & Hedges 100 (M)	-0.93	0.76
BELAIR 100 (VFM)	-1.01	-0.40
Doral 100 (M)	1.18	-1.11
GPC-Generic 100 (M)	0.47	-0.39
KOOL 100	0.26	-1.58
Newport 100	0.90	-0.54
Players 100 (M)	0.82	2.01
Pyramid 100 (M)	-1.80	-0.80
RICHLAND 100 (M)	1.34	0.39
Salem 100	0.03	0.40
Virginia Slims 100 (M)	-0.82	1.01

Factor Analysis

Study I.D.: 900249
Products : Ultra Low Delivery, Menthol 100
Smokers : Low Delivery, Menthol 100

Factor Loadings

	<u>Factor 1</u>	<u>Factor 2</u>
Impact	-0.25	0.95
Irritation	0.04	0.97
Tobacco Taste	-0.87	0.42
Menthol Taste	0.98	0.17
Cooling Effect	0.99	0.08
Tobacco/Menthol Balance	0.99	0.03
Aftertaste	0.23	0.93
Variance Explained By Each Factor:	54%	42%
Total Variance Explained:	96%	

Factor Scores

<u>Product</u>	<u>Factor 1</u>	<u>Factor 2</u>
Benson & Hedges Deluxe Ultra Lts 100 (M)	0.64	0.59
Carlton Ultra Lts 100 (M)	0.47	-1.80
KOOL DELUXE Ultra Lts 100	0.09	-0.26
Merit Ultra Lts 100 (M)	-0.33	0.08
Now Ultra Lts 100 (M)	1.24	1.56
Salem Ultra Lts 100	-0.57	0.19
Triumph Ultra Lts 100 (M)	-2.04	0.45
Virginia Slims Ultra Lts 100 (M)	0.50	-0.82

APPENDIX C

DUNCAN'S MULTIPLE RANGE TEST RESULTS

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MENTHOL MAPPING -- FF-M KS

UNSCREENED

<u>DRAW</u>		<u>MOUTHFUL OF SMOKE</u>		<u>IMPACT</u>	
<u>PRODUCT</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MEAN</u>
KOOL KS	4.36	KOOL KS	5.30	KOOL KS	5.02
Newport KS	4.31	RICHLAND KS MEN	5.25	RICHLAND KS MEN	4.98
Malibu KS MEN	4.31	Salem KS	5.15	Salem KS	4.96
Marlboro KS MEN	4.31	Newport KS	5.06	Doral KS MEN	4.79
Alpine KS	4.22	Alpine KS	5.01	Newport KS MEN	4.74
Pyramid KS MEN	4.21	Doral KS MEN	4.97	Marlboro KS MEN	4.64
Doral KS MEN	4.16	GPC-Generic KS MEN	4.91	Alpine KS	4.62
RICHLAND KS MEN	4.13	Marlboro KS MEN	4.78	GPC-Generic KS MEN	4.55
Players KS MEN	4.05	BELAIR KS (VFM)	4.63	BELAIR KS (VFM)	4.15
Salem KS	4.04	Players KS MEN	4.39	Players KS MEN	4.13
GPC-Generic KS MEN	3.99	Malibu KS MEN	4.28	Malibu KS MEN	4.05
BELAIR KS (VFM)	3.82	Pyramid KS MEN	4.01	Pyramid KS MEN	3.81

*104 Full Flavor, Menthol KS smokers (900231U).

Products not connected by a "side bar" differ from each other by \geq 95% C.L.

26191/1

620944617

MENTHOL MAPPING - FF-M KS

UNSCREENED

IRRITATION		TOBACCO TASTE		MENTHOL TASTE	
PRODUCT	MEAN	PRODUCT	MEAN	PRODUCT	MEAN
RICHLAND KS MEN	4.88	KOOL KS	5.58	Players KS MEN	5.61
KOOL KS	4.68	RICHLAND KS MEN	5.41	Salem KS	5.60
Salem KS	4.65	Newport KS	5.17	BELAIR KS (VFM)	5.45
Doral KS MEN	4.46	Doral KS MEN	5.04	Malibu KS MEN	5.10
GPC-Generic KS MEN	4.40	Marlboro KS MEN	4.93	Marlboro KS MEN	5.09
Newport KS	4.32	GPC-Generic KS MEN	4.91	Alpine KS	5.02
Alpine KS	4.26	Alpine KS	4.86	GPC-Generic KS MEN	4.98
Marlboro KS MEN	4.06	Salem KS	4.78	Doral KS MEN	4.96
Malibu KS MEN	3.76	Malibu KS MEN	4.47	Pyramid KS MEN	4.90
BELAIR KS (VFM)	3.75	Pyramid KS MEN	4.47	Newport KS	4.86
Pyramid KS MEN	3.69	BELAIR KS (VFM)	4.21	RICHLAND KS MEN	4.85
Players KS MEN	3.66	Players KS MEN	4.10	KOOL KS	4.73

*104 Full Flavor, Menthol KS smokers (900231U).

Products not connected by a "side bar" differ from each other by \geq 95% C.I.

26191/2

620944618

MENTHOL MAPPING - FF-M KS

UNSCREENED

<u>COOLING EFFECT</u>		<u>TOBACCO/MENTHOL BALANCE</u>		<u>AFTERTASTE</u>	
<u>PRODUCT</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MEAN</u>
Players KS MEN	5.12	Players KS MEN	5.85	RICHLAND KS MEN	5.38
Salem KS	4.94	BELAIR KS (VFM)	5.69	KOOL KS	5.28
BELAIR KS (VFM)	4.87	Salem KS	5.65	Newport KS	5.15
Marlboro KS MEN	4.66	Malibu KS MEN	5.29	Salem KS	5.08
Malibu KS MEN	4.60	Alpine KS	5.22	Doral KS MEN	5.05
GPC-Generic KS MEN	4.53	Marlboro KS MEN	5.22	Alpine KS	5.02
Alpine KS	4.50	Pyramid KS MEN	5.17	Marlboro KS MEN	4.97
RICHLAND KS MEN	4.31	GPC-Generic KS MEN	5.15	GPC-Generic KS MEN	4.85
Doral KS MEN	4.30	Newport KS	4.99	Players KS MEN	4.85
Pyramid KS MEN	4.30	Doral KS MEN	4.95	Pyramid KS MEN	4.68
Newport KS	4.29	RICHLAND KS MEN	4.84	BELAIR KS (VFM)	4.57
KOOL KS	4.22	KOOL KS	4.81	Malibu KS MEN	4.56

*104 Full Flavor, Menthol KS smokers (900231U).

Products not connected by a "side bar" differ from each other by \geq 95% C.L.

26191/3

620944619

MENTHOL MAPPING - LD-M KS

UNSCREENED

<u>DRAW</u>	<u>PRODUCT</u>	<u>MEAN</u>	<u>MOUTHFUL OF SMOKE</u>	<u>MEAN</u>	<u>IMPACT</u>
	KOOL DELUXE LT KS	4.73	Bristol LT KS MEN	5.35	Bristol LT KS MEN
	Vantage LT KS MEN	4.65	Cambridge LT KS MEN	5.27	Doral LT KS MEN
	KOOL LT KS	4.58	Doral LT KS MEN	5.25	Cambridge LT KS MEN
	Merit LT KS MEN	4.56	GPC-Gen. LT KS MEN	5.09	Salem LT KS
	Newport LT KS	4.44	KOOL MILD KS	4.97	Marlboro LT KS MEN
	Kent GL KS MEN	4.37	Salem LT KS	4.91	KOOL MILD KS
	Alpine LT KS	4.32	Marlboro LT KS MEN	4.82	Vantage LT KS MEN
	KOOL MILD KS	4.31	Vantage LT KS MEN	4.78	BELAIR LT KS
	Marlboro LT KS MEN	4.27	BELAIR LT KS MEN	4.74	GPC-Gen. LT KS MEN
	BELAIR LT KS (VFM)	4.25	Kent GL KS MEN	4.73	Newport LT KS
	Salem LT KS	4.15	BELAIR LT KS (VFM)	4.72	KOOL DELUXE LT KS
	BELAIR LT KS	4.15	Alpine LT KS	4.66	Alpine LT KS
	Cambridge LT KS MEN	4.04	Newport LT KS	4.63	BELAIR LT KS (VFM)
	GPC-Gen. LT KS MEN	3.96	KOOL DELUXE LT KS	4.63	Kent GL KS MEN
	Doral LT KS MEN	3.91	KOOL LT KS	4.62	KOOL LT KS
	Bristol LT KS MEN	3.87	Merit LT KS MEN	4.22	Merit LT KS MEN

*100 Full Flavor, Menthol KS smokers (900238U).

Products not connected by a "side bar" differ from each other by \geq 95% C.L.

26191/7

620944620

MENTHOL MAPPING - LD-M KS

UNSCREENED

IRRITATION

<u>PRODUCT</u>	<u>MEAN</u>
Bristol LT KS MEN	4.60
Doral LT KS MEN	4.57
Vantage LT KS MEN	4.28
GPC-Gen. LT KS MEN	4.19
Salem LT KS	4.15
Cambridge LT KS MEN	4.14
Marlboro LT KS MEN	4.06
BELAIR LT KS	4.06
Newport LT KS	4.06
KOOL MILD KS	4.03
Alpine LT KS	4.00
Kent GL KS MEN	3.97
KOOL DELUXE LT KS	3.94
BELAIR LT KS (VFM)	3.91
KOOL LT KS	3.87
Merit LT KS MEN	3.66

TOBACCO TASTE

<u>PRODUCT</u>	<u>MEAN</u>
Vantage LT KS MEN	5.12
Newport LT KS	5.09
GPC-Gen. LT KS MEN	5.02
Kent GL KS MEN	5.01
BELAIR LT KS	4.99
KOOL LT KS	4.99
Bristol LT KS MEN	4.87
KOOL MILD KS	4.83
Salem LT KS	4.62
Doral LT KS MEN	4.60
Marlboro LT KS MEN	4.59
Alpine LT KS	4.53
KOOL DELUXE LT KS	4.52
BELAIR LT KS (VFM)	4.42
Cambridge LT KS MEN	4.41
Merit LT KS MEN	4.25

MENTHOL TASTE

<u>PRODUCT</u>	<u>MEAN</u>
Cambridge LT KS MEN	5.83
Doral LT KS MEN	5.73
KOOL DELUXE LT KS	5.43
BELAIR LT KS (VFM)	5.41
Bristol LT KS MEN	5.41
Marlboro LT KS MEN	5.40
Salem LT KS	5.35
Alpine LT KS	5.25
Merit LT KS MEN	5.25
GPC-Gen. LT KS MEN	4.88
KOOL MILD KS	4.81
BELAIR LT KS	4.75
KOOL LT KS	4.74
Vantage LT KS MEN	4.62
Kent GL KS MEN	4.53
Newport LT KS	4.45

*100 Full Flavor, Menthol KS smokers (900238U).

Products not connected by a "side bar" differ from each other by $\geq 95\%$ C.L.

26191/8

620944621

MENTHOL MAPPING - LD-M KS

UNSCREENED

COOLING EFFECT

<u>PRODUCT</u>	<u>MEAN</u>
Cambridge LT KS MEN	5.33
Doral LT KS MEN	5.20
BELAIR LT KS (VFM)	4.88
Merit LT KS MEN	4.80
Bristol LT KS MEN	4.78
KOOL DELUXE LT KS	4.77
Alpine LT KS	4.72
Salem LT KS	4.67
Marlboro LT KS MEN	4.65
Vantage LT KS MEN	4.31
KOOL LT KS	4.26
BELAIR LT KS	4.23
KOOL MILD KS	4.22
GPC-Gen. LT KS MEN	4.18
Newport LT KS	4.05
Kent GL KS MEN	3.93

TOBACCO/MENTHOL BALANCE

<u>PRODUCT</u>	<u>MEAN</u>
Cambridge LT KS MEN	5.94
Doral LT KS MEN	5.72
KOOL DELUXE LT KS	5.65
BELAIR LT KS (VFM)	5.64
Alpine LT KS	5.62
Marlboro LT KS MEN	5.58
Merit LT KS MEN	5.52
Bristol LT KS MEN	5.51
Salem LT KS	5.35
GPC-Gen. LT KS MEN	5.06
KOOL MILD KS	4.93
BELAIR LT KS	4.91
Vantage LT KS MEN	4.90
KOOL LT KS	4.90
Kent GL KS MEN	4.62
Newport LT KS	4.61

AFTERTASTE

<u>PRODUCT</u>	<u>MEAN</u>
Bristol LT KS MEN	5.40
Doral LT KS MEN	5.30
BELAIR LT KS	5.18
Salem LT KS	5.07
GPC-Gen. LT KS MEN	5.04
Cambridge LT KS MEN	5.03
Vantage LT KS MEN	4.99
KOOL MILD KS	4.97
KOOL DELUXE LT KS	4.94
Kent GL KS MEN	4.92
Newport LT KS	4.90
BELAIR LT KS (VFM)	4.87
Marlboro LT KS MEN	4.85
Alpine LT KS	4.75
KOOL LT KS	4.73
Merit LT KS MEN	4.73

*100 Full Flavor, Menthol KS smokers (900238U).

Products not connected by a "side bar" differ from each other by $\geq 95\%$ C.L.

26191/9

620944622

MENTHOL MAPPING - LD-M KS

UNSCREENED

<u>DRAW</u>		<u>MOUTHFUL OF SMOKE</u>		<u>IMPACT</u>	
<u>PRODUCT</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MEAN</u>
Merit LT KS MEN	4.57	Doral LT KS MEN	5.12	Doral LT KS MEN	5.02
KOOL MILD KS	4.54	Cambridge LT KS MEN	5.03	Bristol LT KS MEN	4.63
KOOL LT KS	4.45	GPC-Gen. LT KS MEN	5.01	GPC-Gen. LT KS MEN	4.58
KOOL DELUXE LT KS	4.39	Bristol LT KS MEN	5.00	Cambridge LT KS MEN	4.47
BELAIR LT KS (VFM)	4.34	Salem LT KS	4.97	Salem LT KS	4.37
Vantage LT KS MEN	4.31	KOOL MILD KS	4.91	BELAIR LT KS (VFM)	4.30
Newport LT KS	4.31	BELAIR LT KS	4.76	KOOL MILD KS	4.28
Kent GL KS MEN	4.31	BELAIR LT KS (VFM)	4.63	BELAIR LT KS	4.26
BELAIR LT KS	4.10	Marlboro LT KS MEN	4.57	KOOL DELUXE LT KS	4.19
GPC-Gen. LT KS MEN	4.02	Alpine LT KS	4.52	Alpine LT KS	4.18
Alpine LT KS	3.99	KOOL DELUXE LT KS	4.45	Vantage LT KS MEN	4.04
Marlboro LT KS MEN	3.95	Vantage LT KS MEN	4.39	Marlboro LT KS MEN	4.02
Salem LT KS	3.94	Newport LT KS	4.39	Newport LT KS	3.99
Doral LT KS MEN	3.93	Kent GL KS MEN	4.35	Kent GL KS MEN	3.88
Bristol LT KS MEN	3.90	KOOL LT KS	4.19	KOOL LT KS	3.80
Cambridge LT KS MEN	3.89	Merit LT KS MEN	4.03	Merit LT KS MEN	3.71

*77 Low Delivery, Menthol KS smokers (900241U).

Products not connected by a "side bar" differ from each other by \geq 95% C.L.

26191/19

620944623

MENTHOL MAPPING - LD-M KS

UNSCREENED

<u>IRRITATION</u>		<u>TOBACCO TASTE</u>		<u>MENTHOL TASTE</u>	
<u>PRODUCT</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MEAN</u>
Doral LT KS MEN	4.83	Vantage LT KS MEN	5.10	Cambridge LT KS MEN	5.67
GPC-Gen. LT KS MEN	4.49	Bristol LT KS MEN	5.07	Doral LT KS MEN	5.54
Bristol LT KS MEN	4.45	KOOL MILD KS	5.03	Merit LT KS MEN	5.25
KOOL MILD KS	4.25	GPC-Gen. LT KS MEN	4.99	BELAIR LT KS (VFM)	5.25
Cambridge LT KS MEN	4.21	BELAIR LT KS	4.97	Salem LT KS	5.23
BELAIR LT KS (VFM)	4.08	KOOL LT KS	4.79	KOOL DELUXE LT KS	5.14
Alpine LT KS	4.08	Kent GL KS MEN	4.73	Bristol LT KS MEN	5.12
BELAIR LT KS	4.06	Newport LT KS	4.70	Alpine LT KS	5.03
Salem LT KS	3.98	Marlboro LT KS MEN	4.55	Marlboro LT KS MEN	4.98
Vantage LT KS MEN	3.97	Doral LT KS MEN	4.48	KOOL MILD KS	4.55
KOOL DELUXE LT KS	3.84	Alpine LT KS	4.44	GPC-Gen. LT KS MEN	4.54
Marlboro LT KS MEN	3.82	BELAIR LT KS (VFM)	4.44	Kent GL KS MEN	4.42
Newport LT KS	3.81	Salem LT KS	4.33	KOOL LT KS	4.31
Kent GL KS MEN	3.61	KOOL DELUXE LT KS	4.28	BELAIR LT KS	4.31
KOOL LT KS	3.56	Cambridge LT KS MEN	4.23	Newport LT KS	4.30
Merit LT KS MEN	3.46	Merit LT KS MEN	3.94	Vantage LT KS MEN	4.11

*77 Low Delivery, Menthol KS smokers (900241U).

Products not connected by a "side bar" differ from each other by $\geq 95\%$ C.I.

26191/20

620944624

MENTHOL MAPPING - LD-M KS

UNSCREENED

COOLING EFFECT

<u>PRODUCT</u>	<u>MEAN</u>
Cambridge LT KS MEN	5.43
Doral LT KS MEN	5.42
Salem LT KS	5.11
Merit LT KS MEN	5.10
KOOL DELUXE LT KS	5.06
BELAIR LT KS (VFM)	5.01
Bristol LT KS MEN	4.86
Marlboro LT KS MEN	4.85
Alpine LT KS	4.84
KOOL MILD KS	4.39
GPC-Gen. LT KS MEN	4.39
Kent GL KS MEN	4.36
Newport LT KS	4.32
KOOL LT KS	4.20
BELAIR LT KS	4.16
Vantage LT KS MEN	3.90

TOBACCO/MENTHOL BALANCE

<u>PRODUCT</u>	<u>MEAN</u>
Cambridge LT KS MEN	6.03
Doral LT KS MEN	5.91
Merit LT KS MEN	5.65
KOOL DELUXE LT KS	5.61
BELAIR LT KS (VFM)	5.44
Salem LT KS	5.39
Bristol LT KS MEN	5.32
Alpine LT KS	5.29
Marlboro LT KS MEN	5.27
GPC-Gen. LT KS MEN	4.85
KOOL MILD KS	4.80
KOOL LT KS	4.80
Kent GL KS MEN	4.74
Newport LT KS	4.66
Vantage LT KS MEN	4.49
BELAIR LT KS	4.40

AFTERTASTE

<u>PRODUCT</u>	<u>MEAN</u>
GPC-Gen. LT KS MEN	5.05
BELAIR LT KS	5.00
Bristol LT KS MEN	4.96
KOOL MILD KS	4.82
Doral LT KS MEN	4.82
Alpine LT KS	4.78
BELAIR LT KS (VFM)	4.77
Salem LT KS	4.72
Vantage LT KS MEN	4.71
Marlboro LT KS MEN	4.70
Cambridge LT KS MEN	4.66
KOOL DELUXE LT KS	4.62
Newport LT KS	4.60
Kent GL KS MEN	4.58
Merit LT KS MEN	4.39
KOOL LT KS	4.39

*77 Low Delivery, Menthol KS smokers (900241U).

Products not connected by a "side bar" differ from each other by $\geq 95\%$ C.L.

26191/21

620944625

MENTHOL MAPPING - LD-M KS

SCREENED

DRAW		MOUTHFUL OF SMOKE		IMPACT	
PRODUCT	MEAN	PRODUCT	MEAN	PRODUCT	MEAN
KOOL MILD KS	4.99	Cambridge LT KS MEN	5.13	Doral LT KS MEN	5.19
KOOL LT KS	4.91	Doral LT KS MEN	5.11	Bristol LT KS MEN	4.67
Merit LT KS MEN	4.85	Salem LT KS	5.09	GPC-Gen. LT KS MEN	4.59
KOOL DELUXE LT KS	4.77	GPC-Gen. LT KS MEN	5.08	Cambridge LT KS MEN	4.56
Newport LT KS	4.75	Bristol LT KS MEN	5.04	BELAIR LT KS (VFM)	4.40
BELAIR LT KS (VFM)	4.58	KOOL MILD KS	5.01	Salem LT KS	4.39
Vantage LT KS MEN	4.56	BELAIR LT KS (VFM)	4.76	KOOL MILD KS	4.35
Kent GL KS MEN	4.53	BELAIR LT KS	4.76	BELAIR LT KS	4.29
BELAIR LT KS	4.37	Marlboro LT KS MEN	4.53	Alpine LT KS	4.16
Alpine LT KS	4.22	KOOL DELUXE LT KS	4.49	KOOL DELUXE LT KS	4.16
Salem LT KS	4.20	Kent GL KS MEN	4.43	Vantage LT KS MEN	4.12
Marlboro LT KS MEN	4.19	Vantage LT KS MEN	4.42	Marlboro LT KS MEN	4.01
GPC-Gen. LT KS MEN	4.15	Alpine LT KS	4.35	Newport LT KS	3.97
Doral LT KS MEN	4.14	Newport LT KS	4.30	KOOL LT KS	3.83
Bristol LT KS MEN	4.07	KOOL LT KS	4.19	Merit LT KS MEN	3.82
Cambridge LT KS MEN	4.06	Merit LT KS MEN	4.08	Kent GL KS MEN	3.80
	(50)*		(48)		(51)

*Number of Low Delivery, Menthol KS smokers retained (900241S).

Products not connected by a "side bar" differ from each other by $\geq 95\%$ C.L.

26191/16

620944626

MENTHOL MAPPING - LD-M KS

SCREENED

COOLING EFFECT

PRODUCT	MEAN
Doral LT KS MEN	5.51
Cambridge LT KS MEN	5.46
Merit LT KS MEN	5.16
Salem LT KS	5.15
BELAIR LT KS (VFM)	5.07
KOOL DELUXE LT KS	5.03
Marlboro LT KS MEN	4.87
Alpine LT KS	4.76
Bristol LT KS MEN	4.74
Kent GL KS MEN	4.21
KOOL MILD KS	4.18
Newport LT KS	4.14
GPC-Gen. LT KS MEN	4.02
KOOL LT KS	4.01
BELAIR LT KS	3.92
Vantage LT KS MEN	3.66

(56)

TOBACCO/MENTHOL BALANCE

PRODUCT	MEAN
Cambridge LT KS MEN	6.25
Doral LT KS MEN	6.02
Merit LT KS MEN	5.88
KOOL DELUXE LT KS	5.77
BELAIR LT KS (VFM)	5.48
Bristol LT KS MEN	5.47
Salem LT KS	5.46
Marlboro LT KS MEN	5.41
Alpine LT KS	5.35
Kent GL KS MEN	4.70
GPC-Gen. LT KS MEN	4.69
KOOL LT KS	4.66
KOOL MILD KS	4.65
Newport LT KS	4.54
Vantage LT KS MEN	4.48
BELAIR LT KS	4.26

(56)

AFTERTASTE

PRODUCT	MEAN
GPC-Gen. LT KS MEN	4.95
BELAIR LT KS	4.93
Bristol LT KS MEN	4.91
KOOL MILD KS	4.80
Salem LT KS	4.80
Doral LT KS MEN	4.80
Alpine LT KS	4.75
KOOL DELUXE LT KS	4.68
BELAIR LT KS (VFM)	4.67
Marlboro LT KS MEN	4.63
Newport LT KS	4.53
Kent GL KS MEN	4.50
Cambridge LT KS MEN	4.50
Vantage LT KS MEN	4.35
Merit LT KS MEN	4.28
KOOL LT KS	4.27

(41)

*Number of Low Delivery, Menthol KS smokers retained (900241S).

Products not connected by a "side bar" differ from each other by \geq 95% C.I.

26191/18

620944627

MENTHOL MAPPING - ULTRA-M KS

UNSCREENED

<u>DRAW</u>		<u>MOUTHFUL OF SMOKE</u>		<u>IMPACT</u>	
<u>PRODUCT</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MEAN</u>
Carlton UL KS MEN	5.73	True UL KS MEN	4.76	Merit UL KS MEN	4.22
Now UL KS MEN	5.00	Salem UL KS	4.73	Salem UL KS	4.10
KOOL DELUXE UL KS	4.59	Merit UL KS MEN	4.54	True UL KS MEN	3.73
Merit UL KS MEN	4.02	KOOL DELUXE UL KS	4.11	KOOL DELUXE UL KS	3.57
Salem UL KS	4.00	Now UL KS MEN	3.42	Now UL KS MEN	3.46
True UL KS MEN	3.45	Carlton UL KS MEN	2.40	Carlton UL KS MEN	2.45

*74 Low Delivery, Menthol KS smokers (900245U).

Products not connected by a "side bar" differ from each other by \geq 95% C.I.

26191/25

620944628

MENTHOL MAPPING - ULTRA-M KS

UNSCREENED

IRRITATION

<u>PRODUCT</u>	<u>MEAN</u>
Merit UL KS MEN	3.91
Salem UL KS	3.68
True UL KS MEN	3.51
KOOL DELUXE UL KS	3.33
Now UL KS MEN	3.22
Carlton UL KS MEN	2.48

TOBACCO TASTE

<u>PRODUCT</u>	<u>MEAN</u>
True UL KS MEN	4.80
KOOL DELUXE UL KS	4.74
Salem UL KS	4.40
Merit UL KS MEN	4.04
Now UL KS MEN	3.57
Carlton UL KS MEN	3.29

MENTHOL TASTE

<u>PRODUCT</u>	<u>MEAN</u>
Merit UL KS MEN	5.61
Now UL KS MEN	5.48
Salem UL KS	4.92
Carlton UL KS MEN	4.16
KOOL DELUXE UL KS	4.05
True UL KS MEN	3.89

*74 Low Delivery, Menthol KS smokers (900245U).

Products not connected by a "side bar" differ from each other by $\geq 95\%$ C.L.

26191/26

620944629

MENTHOL MAPPING - ULTRA-M KS

UNSCREENED

COOLING EFFECT		TOBACCO/MENTHOL BALANCE		AFTERTASTE	
PRODUCT	MEAN	PRODUCT	MEAN	PRODUCT	MEAN
Merit UL KS MEN	5.26	Now UL KS MEN	6.02	Merit UL KS MEN	4.72
Now UL KS MEN	5.10	Merit UL KS MEN	6.01	Salem UL KS	4.67
Salem UL KS	4.76	Salem UL KS	5.42	KOOL DELUXE UL KS	4.55
Carlton UL KS MEN	4.01	Carlton UL KS MEN	5.07	True UL KS MEN	4.50
KOOL DELUXE UL KS	3.94	KOOL DELUXE UL KS	4.68	Now UL KS MEN	4.43
True UL KS MEN	3.77	True UL KS MEN	4.49	Carlton UL KS MEN	3.87

*74 Low Delivery, Menthol KS smokers (900245U).

Products not connected by a "side bar" differ from each other by $\geq 95\%$ C.L.

26191/27

620944630

MENTHOL MAPPING -- FF-M 100

UNSCREENED

<u>DRAW</u>		<u>MOUTHFUL OF SMOKE</u>		<u>IMPACT</u>	
<u>PRODUCT</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MEAN</u>
Pyramid 100 MEN	4.28	RICHLAND 100 MEN	5.02	RICHLAND 100 MEN	4.79
Doral 100 MEN	4.04	Newport 100	4.96	Doral 100 MEN	4.73
KOOL 100	4.01	Doral 100 MEN	4.93	Newport 100	4.57
Newport 100	3.95	Players 100 MEN	4.71	Players 100 MEN	4.31
BELAIR 100 (VFM)	3.93	GPC-Gen. 100 MEN	4.60	GPC-Gen. 100 MEN	4.25
Alpine 100	3.91	KOOL 100	4.60	KOOL 100	4.25
GPC-Gen. 100 MEN	3.87	Salem 100	4.58	Salem 100	4.18
B&H 100 MEN	3.83	B&H 100 MEN	4.12	Alpine 100	3.67
RICHLAND 100 MEN	3.80	Va. Slims 100 MEN	4.10	BELAIR 100 (VFM)	3.62
Salem 100	3.65	Alpine 100	4.08	B&H 100 MEN	3.58
Players 100 MEN	3.61	BELAIR 100 (VFM)	4.03	Va. Slims 100 MEN	3.56
Va. Slims 100 MEN	3.57	Pyramid 100 MEN	3.52	Pyramid 100 MEN	3.07

*112 Full Flavor, Menthol 100 smokers (900246U).

Products not connected by a "side bar" differ from each other by \geq 95% C.L.

26191/34

620944631

MENTHOL MAPPING - FF-M 100

UNSCREENED

IRRITATION

TOBACCO TASTE

MENTHOL TASTE

PRODUCT	MEAN	PRODUCT	MEAN	PRODUCT	MEAN
Doral 100 MEN	4.31	Doral 100 MEN	5.15	Players 100 MEN	5.50
RICHLAND 100 MEN	4.19	Newport 100	4.93	B&H 100 MEN	5.33
Newport 100	3.94	KOOL 100	4.83	Va. Slims 100 MEN	5.25
GPC-Gen. 100 MEN	3.84	RICHLAND 100 MEN	4.72	Salem 100	5.10
KOOL 100	3.79	GPC-Gen. 100 MEN	4.52	Alpine 100	5.04
Players 100 MEN	3.63	Salem 100	4.19	RICHLAND 100 MEN	4.96
Salem 100	3.54	Players 100 MEN	4.07	BELAIR 100 (VFM)	4.90
Alpine 100	3.26	Alpine 100	4.00	Pyramid 100 MEN	4.88
BELAIR 100 (VFM)	3.15	BELAIR 100 (VFM)	3.92	GPC-Gen. 100 MEN	4.86
Va. Slims 100 MEN	3.05	B&H 100 MEN	3.79	Newport 100	4.78
B&H 100 MEN	2.98	Pyramid 100 MEN	3.78	Doral 100 MEN	4.64
Pyramid 100 MEN	2.74	Va. Slims 100 MEN	3.73	KOOL 100	4.51

*112 Full Flavor, Menthol 100 smokers (900246U).

Products not connected by a "side bar" differ from each other by \geq 95% C.L.

26191/35

620944632

MENTHOL MAPPING - FF-M 100

UNSCREENED

COOLING EFFECT

PRODUCT	MEAN
Players 100 MEN	5.02
Va. Slims 100 MEN	4.74
B&H 100 MEN	4.59
Alpine 100 MEN	4.35
RICHLAND 100 MEN	4.29
Salem 100	4.28
GPC-Gen. 100 MEN	4.14
BELAIR 100 (VFM)	4.13
Pyramid 100 MEN	4.10
Newport 100	4.00
Doral 100 MEN	3.93
KOOL 100	3.74

TOBACCO/MENTHOL BALANCE

PRODUCT	MEAN
Players 100 MEN	5.63
Va. Slims 100 MEN	5.62
B&H 100 MEN	5.55
Alpine 100	5.28
Salem 100	5.24
BELAIR 100 (VFM)	5.23
Pyramid 100 MEN	5.23
RICHLAND 100 MEN	5.15
GPC-Gen. 100 MEN	5.07
Newport 100	4.85
Doral 100 MEN	4.79
KOOL 100	4.73

AFTERTASTE

PRODUCT	MEAN
Doral 100 MEN	4.87
Newport 100	4.76
KOOL 100	4.68
RICHLAND 100 MEN	4.62
GPC-Gen. 100 MEN	4.56
Players 100 MEN	4.49
Salem 100	4.27
Alpine 100	4.08
B&H 100 MEN	3.91
Va. Slims 100 MEN	3.88
BELAIR 100 (VFM)	3.83
Pyramid 100 MEN	3.78

*112 Full Flavor, Menthol 100 smokers (900246U).

Products not connected by a "side bar" differ from each other by \geq 95% C.I.

26191/36

620944633

MENTHOL MAPPING - FF-M 100

SCREENED

<u>DRAW</u>		<u>MOUTHFUL OF SMOKE</u>		<u>IMPACT</u>	
<u>PRODUCT</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MEAN</u>
Pyramid 100 MEN	4.53	RICHLAND 100 MEN	5.25	RICHLAND 100 MEN	4.96
Doral 100 MEN	4.39	Newport 100	5.18	Doral 100 MEN	4.86
KOOL 100	4.33	Doral 100 MEN	5.12	Newport 100	4.69
Newport 100	4.30	Players 100 MEN	4.88	Players 100 MEN	4.33
Alpine 100	4.26	GPC-Gen. 100 MEN	4.76	GPC-Gen. 100 MEN	4.28
BELAIR 100 (VFM)	4.26	KOOL 100	4.69	KOOL 100	4.28
GPC-Gen. 100 MEN	4.17	Salem 100	4.65	Salem 100	4.16
RICHLAND 100 MEN	4.13	B&H 100 MEN	4.18	Alpine 100	3.72
B&H 100 MEN	4.04	Alpine 100	4.16	BELAIR 100 (VFM)	3.53
Salem 100	3.79	Va. Slims 100 MEN	4.05	B&H 100 MEN	3.47
Va. Slims 100 MEN	3.74	BELAIR 100 (VFM)	4.04	Va. Slims 100 MEN	3.45
Players 100 MEN	3.73	Pyramid 100 MEN	3.41	Pyramid 100 MEN	2.84
	(68)*		(78)		(76)

*Number of Full Flavor, Menthol 100 smokers retained (900246S).

Products not connected by a "side bar" differ from each other by $\geq 95\%$ C.L.

26191/37

620944634

MENTHOL MAPPING - FF-M 100

SCREENED

COOLING EFFECT

<u>PRODUCT</u>	<u>MEAN</u>
Players 100 MEN	5.27
Va. Slims 100 MEN	4.85
B&H 100 MEN	4.66
Alpine 100	4.44
Salem 100	4.38
RICHLAND 100 MEN	4.37
BELAIR 100 (VFM)	4.17
GPC-Gen. 100 MEN	4.10
Newport 100	4.07
Pyramid 100 MEN	4.04
Doral 100 MEN	3.80
KOOL 100	3.59

(76)

TOBACCO/MENTHOL BALANCE

<u>PRODUCT</u>	<u>MEAN</u>
Va. Slims 100 MEN	5.80
Players 100 MEN	5.66
B&H 100 MEN	5.66
Alpine 100	5.38
Salem 100	5.35
BELAIR 100 (VFM)	5.29
Pyramid 100 MEN	5.24
RICHLAND 100 MEN	5.09
GPC-Gen. 100 MEN	4.99
Newport 100	4.76
KOOL 100	4.66
Doral 100 MEN	4.64

(75)

AFTERTASTE

<u>PRODUCT</u>	<u>MEAN</u>
Doral 100 MEN	5.17
KOOL 100	5.04
Newport 100	5.03
RICHLAND 100 MEN	4.90
GPC-Gen. 100 MEN	4.87
Players 100 MEN	4.62
Salem 100	4.37
Alpine 100	4.23
Va. Slims 100 MEN	3.83
BELAIR 100 (VFM)	3.80
B&H 100 MEN	3.79
Pyramid 100 MEN	3.74

(63)

*Number of Full Flavor, Menthol 100 smokers retained (900246S).

Products not connected by a "side bar" differ from each other by \geq 95% C.L.

26191/39

620944635

MENTHOL MAPPING - LD-M 100

UNSCREENED

<u>DRAW</u>		<u>MOUTHFUL OF SMOKE</u>		<u>IMPACT</u>	
<u>PRODUCT</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MEAN</u>
Merit LT 100 MEN	4.18	Century LT 100 MEN	5.00	KOOL MILD 100	4.59
Alpine LT 100	4.10	Doral LT 100 MEN	4.97	Century LT 100 MEN	4.51
KOOL LT 100	4.09	KOOL MILD 100	4.97	Doral LT 100 MEN	4.36
BELAIR LT 100 (VFM)	4.04	Bristol LT 100 MEN	4.70	Bristol LT 100 MEN	4.09
BELAIR LT 100	4.02	Cambridge LT 100 MN	4.49	Cambridge LT 100 MN	4.04
Pyramid LT 100 MEN	3.98	KOOL DELUXE LT 100	4.48	KOOL DELUXE LT 100	3.88
Newport LT 100	3.94	Marlboro LT 100 MEN	4.41	Alpine LT 100	3.83
Marlboro LT 100 MEN	3.93	B&H LT 100 MEN	4.31	Merit LT 100 MEN	3.81
Cambridge LT 100 MN	3.93	BELAIR LT 100 (VFM)	4.29	Marlboro LT 100 MEN	3.64
B&H LT 100 MEN	3.91	Merit LT 100 MEN	4.28	Salem LT 100	3.60
Doral LT 100 MEN	3.86	Alpine LT 100	4.26	B&H LT 100 MEN	3.59
Salem LT 100	3.85	Salem LT 100	4.17	Pyramid LT 100 MEN	3.57
KOOL DELUXE LT 100	3.82	KOOL LT 100	4.14	BELAIR LT 100 (VFM)	3.53
Va. Slims LT 100 MN	3.76	Pyramid LT 100 MEN	4.10	KOOL LT 100	3.50
Century LT 100 MEN	3.76	BELAIR LT 100	4.03	BELAIR LT 100	3.48
GPC-Gen. LT 100 MEN	3.76	Va. Slims LT 100 MN	3.98	Va. Slims LT 100 MN	3.28
KOOL MILD 100	3.64	GPC-Gen. LT 100 MEN	3.96	Newport LT 100	3.23
Bristol LT 100 MEN	3.58	Newport LT 100	3.76	GPC-Gen. LT 100 MEN	3.11

*105 Full Flavor, Menthol 100 smokers (900247U).

Products not connected by a "side bar" differ from each other by $\geq 95\%$ C.I.

26191/31

620944636

MENTHOL MAPPING - LD-M 100

UNSCREENED

IRRITATION

PRODUCT	MEAN
Century LT 100 MEN	4.08
KOOL MILD 100	4.06
Doral LT 100 MEN	4.04
Bristol LT 100 MEN	3.60
Merit LT 100 MEN	3.44
Cambridge LT 100 MN	3.42
Pyramid LT 100 MEN	3.36
KOOL LT 100	3.34
KOOL DELUXE LT 100	3.34
Alpine LT 100	3.34
Marlboro LT 100 MEN	3.32
BELAIR LT 100	3.30
Salem LT 100	3.18
BELAIR LT 100 (VFM)	3.15
Newport LT 100	3.14
B&H LT 100 MEN	3.08
GPC-Gen. LT 100 MEN	3.04
Va. Slims LT 100 MN	2.85

TOBACCO TASTE

PRODUCT	MEAN
KOOL MILD 100	4.78
Century LT 100 MEN	4.70
KOOL LT 100	4.64
Doral LT 100 MEN	4.58
BELAIR LT 100 (VFM)	4.41
Pyramid LT 100 MEN	4.38
Bristol LT 100 MEN	4.26
Newport LT 100	4.24
Merit LT 100 MEN	4.20
GPC-Gen. LT 100 MEN	4.18
Marlboro LT 100 MEN	4.06
BELAIR LT 100	3.97
KOOL DELUXE LT 100	3.97
Salem LT 100	3.96
Alpine LT 100	3.93
Cambridge LT 100 MN	3.81
B&H LT 100 MEN	3.57
Va. Slims LT 100 MN	3.50

MENTHOL TASTE

PRODUCT	MEAN
Cambridge LT 100 MN	5.80
B&H LT 100 MEN	5.71
Va. Slims LT 100 MN	5.68
KOOL DELUXE LT 100	5.56
Alpine LT 100	5.43
BELAIR LT 100 (VFM)	5.36
Salem LT 100	5.26
Doral LT 100 MEN	5.24
Merit LT 100 MEN	5.23
Marlboro LT 100 MEN	5.22
Bristol LT 100 MEN	5.21
Century LT 100 MEN	5.13
KOOL MILD 100	4.98
Pyramid LT 100 MEN	4.78
GPC-Gen. LT 100 MEN	4.74
KOOL LT 100	4.64
BELAIR LT 100	4.54
Newport LT 100	4.36

*105 Full Flavor, Menthol 100 smokers (900247U).

Products not connected by a "side bar" differ from each other by $\geq 95\%$ C.L.

26191/32

620944637

MENTHOL MAPPING - LD-M 100

UNSCREENED

COOLING EFFECT

<u>PRODUCT</u>	<u>MEAN</u>
Va. Slims LT 100 MN	4.84
Cambridge Lt 100 MN	4.81
B&H LT 100 MEN	4.74
KOOL DELUXE LT 100	4.70
Doral LT 100 MEN	4.61
Alpine LT 100	4.49
Merit LT 100 MEN	4.49
Salem LT 100	4.35
BELAIR LT 100 (VFM)	4.31
Marlboro LT 100 MEN	4.29
Century LT 100 MEN	4.24
Bristol LT 100 MEN	4.22
KOOL MILD 100	4.10
Pyramid LT 100 MEN	3.90
KOOL LT 100	3.73
Newport LT 100	3.68
BELAIR LT 100	3.60
GPC-Gen. LT 100 MEN	3.57

TOBACCO/MENTHOL BALANCE

<u>PRODUCT</u>	<u>MEAN</u>
Cambridge LT 100 MN	6.00
B&H LT 100 MEN	5.92
Va. Slims LT 100 MN	5.91
KOOL DELUXE LT 100	5.77
Salem LT 100	5.46
Marlboro LT 100 MEN	5.46
Alpine LT 100	5.46
BELAIR LT 100 (VFM)	5.45
Bristol LT 100 MEN	5.37
Merit LT 100 MEN	5.34
Doral LT 100 MEN	5.34
Century LT 100 MEN	5.23
KOOL MILD 100	5.14
Pyramid LT 100 MEN	5.06
GPC-Gen. LT 100 MEN	4.89
KOOL LT 100	4.83
BELAIR LT 100	4.77
Newport LT 100	4.76

AFTERTASTE

<u>PRODUCT</u>	<u>MEAN</u>
Century LT 100 MEN	4.56
KOOL MILD 100	4.54
Doral LT 100 MEN	4.47
Pyramid LT 100 MEN	4.26
Bristol LT 100 MEN	4.23
BELAIR LT 100	4.22
Cambridge LT 100 MN	4.22
Merit LT 100 MEN	4.18
KOOL DELUXE LT 100	4.17
KOOL LT 100	4.13
Marlboro LT 100 MEN	4.12
Alpine LT 100	4.00
GPC-Gen. LT 100 MEN	3.99
BELAIR LT 100 (VFM)	3.92
Salem LT 100	3.92
B&H LT 100 MEN	3.90
Va. Slims LT 100 MN	3.89
Newport LT 100	3.86

*105 Full Flavor, Menthol 100 smokers (900247U).

Products not connected by a "side bar" differ from each other by \geq 95% C.I.

26191/33

620944638

MENTHOL MAPPING - LD-M 100

UNSCREENED

<u>DRAW</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MOUTHFUL OF SMOKE</u>	<u>MEAN</u>	<u>IMPACT</u>
Newport LT 100	4.37	KOOL MILD 100	5.40	Century LT 100 MEN	5.13
KOOL LT 100	4.35	Century LT 100 MEN	5.06	KOOL MILD 100	4.94
Va. Slims LT 100 MN	4.31	Bristol LT 100 MEN	5.04	Doral LT 100 MEN	4.80
BELAIR LT 100	4.30	Doral LT 100 MEN	4.99	Cambridge LT 100 MN	4.77
Salem LT 100	4.27	Cambridge LT 100 MN	4.96	Bristol LT 100 MEN	4.54
GPC-Gen. LT 100 MEN	4.23	Alpine LT 100	4.86	Salem LT 100	4.50
Doral LT 100 MEN	4.21	Marlboro LT 100 MEN	4.80	KOOL DELUXE LT 100	4.48
Pyramid LT 100 MEN	4.21	Salem LT 100	4.77	B&H LT 100 MEN	4.39
BELAIR LT 100 (VFM)	4.21	Merit LT 100 MEN	4.77	Alpine LT 100	4.35
Marlboro LT 100 MEN	4.18	KOOL DELUXE LT 100	4.70	BELAIR LT 100 (VFM)	4.32
KOOL DELUXE LT 100	4.18	Pyramid LT 100 MEN	4.61	KOOL LT 100	4.29
Merit LT 100 MEN	4.17	B&H LT 100 MEN	4.58	Marlboro LT 100 MEN	4.28
B&H LT 100 MEN	4.15	BELAIR LT 100 (VFM)	4.58	Merit LT 100 MEN	4.26
Alpine LT 100	4.11	KOOL LT 100	4.37	Pyramid LT 100 MEN	4.11
Cambridge LT 100 MN	4.09	BELAIR LT 100	4.37	Va. Slims LT 100 MN	4.05
Bristol LT 100 MEN	4.04	Va. Slims LT 100 MN	4.28	GPC-Gen. LT 100 MEN	4.00
Century LT 100 MEN	3.79	GPC-Gen. LT 100 MEN	4.21	BELAIR LT 100	3.94
KOOL MILD 100	3.74	Newport LT 100	4.14	Newport LT 100	3.67

*98 Low Delivery, Menthol 100 smokers (900248U).

Products not connected by a "side bar" differ from each other by \geq 95% C.L.

26191/40

620944639

MENTHOL MAPPING - LD-M 100

UNSCREENED

IRRITATION

PRODUCT	MEAN
Century LT 100 MEN	4.77
Doral LT 100 MEN	4.54
KOOL MILD 100	4.46
Cambridge LT 100 MN	4.31
Bristol LT 100 MEN	4.24
Alpine LT 100	4.19
KOOL DELUXE LT 100	4.14
Salem LT 100	4.09
Marlboro LT 100 MEN	4.01
B&H LT 100 MEN	3.99
BELAIR LT 100 (VFM)	3.91
KOOL LT 100	3.89
Merit LT 100 MEN	3.89
GPC-Gen. LT 100 MEN	3.81
Pyramid LT 100 MEN	3.80
BELAIR LT 100	3.63
Va. Slims LT 100 MN	3.60
Newport LT 100	3.59

TOBACCO TASTE

PRODUCT	MEAN
Newport LT 100	5.01
KOOL MILD 100	4.96
KOOL LT 100	4.88
BELAIR LT 100	4.87
GPC-Gen. LT 100 MEN	4.86
Century LT 100 MEN	4.81
Pyramid LT 100 MEN	4.79
Doral LT 100 MEN	4.76
Marlboro LT 100 MEN	4.71
Bristol LT 100 MEN	4.69
BELAIR LT 100 (VFM)	4.68
Merit LT 100 MEN	4.59
KOOL DELUXE LT 100	4.53
Salem LT 100	4.50
Alpine LT 100	4.38
Cambridge LT 100 MN	4.23
B&H LT 100 MEN	4.07
Va. Slims LT 100 MN	4.00

MENTHOL TASTE

PRODUCT	MEAN
Cambridge LT 100 MN	5.65
B&H LT 100 MEN	5.59
Va. Slims LT 100 MN	5.42
Alpine LT 100	5.32
Doral LT 100 MEN	5.24
Merit LT 100 MEN	5.24
Century LT 100 MEN	5.23
KOOL DELUXE LT 100	5.22
Bristol LT 100 MEN	5.09
Salem LT 100	5.06
BELAIR LT 100 (VFM)	5.04
KOOL MILD 100	5.02
Marlboro LT 100 MEN	4.91
Pyramid LT 100 MEN	4.55
KOOL LT 100	4.43
BELAIR LT 100	4.36
Newport LT 100	4.15
GPC-Gen. LT 100 MEN	4.12

*98 Low Delivery, Menthol 100 smokers (900248U).

Products not connected by a "side bar" differ from each other by $\geq 95\%$ C.L.

26191/41

620944640

MENTHOL MAPPING - LD-M 100

UNSCREENED

COOLING EFFECT

<u>PRODUCT</u>	<u>MEAN</u>
Cambridge LT 100 MN	5.32
B&H LT 100 MEN	5.28
Va. Slims LT 100 MN	5.22
Doral LT 100 MEN	4.93
KOOL DELUXE LT 100	4.87
Alpine LT 100	4.85
Merit LT 100 MEN	4.82
Century LT 100 MEN	4.71
BELAIR LT 100 (VFM)	4.66
Salem LT 100	4.62
Bristol LT 100 MEN	4.58
KOOL MILD 100	4.58
Marlboro LT 100 MEN	4.49
Pyramid LT 100 MEN	4.14
BELAIR LT 100	4.02
KOOL LT 100	3.98
Newport LT 100	3.95
GPC-Gen. LT 100 MEN	3.73

TOBACCO/MENTHOL BALANCE

<u>PRODUCT</u>	<u>MEAN</u>
B&H LT 100 MEN	5.72
Cambridge LT 100 MN	5.63
Va. Slims LT 100 MN	5.61
Alpine LT 100	5.44
Merit LT 100 MEN	5.35
KOOL DELUXE LT 100	5.35
Doral LT 100 MEN	5.30
Century LT 100 MEN	5.20
Salem LT 100	5.13
BELAIR LT 100 (VFM)	5.12
Bristol LT 100 MEN	5.10
Marlboro LT 100 MEN	5.07
KOOL MILD 100	5.04
KOOL LT 100	4.78
Pyramid LT 100 MEN	4.78
BELAIR LT 100	4.53
Newport LT 100	4.49
GPC-Gen. LT 100 MEN	4.36

AFTERTASTE

<u>PRODUCT</u>	<u>MEAN</u>
Century LT 100 MEN	4.99
KOOL MILD 100	4.95
Pyramid LT 100 MEN	4.80
KOOL DELUXE LT 100	4.80
KOOL LT 100	4.73
Cambridge LT 100 MN	4.73
GPC-Gen. LT 100 MEN	4.72
Bristol LT 100 MEN	4.70
Doral LT 100 MEN	4.68
Alpine LT 100	4.67
BELAIR LT 100	4.67
Salem LT 100	4.67
BELAIR LT 100 (VFM)	4.65
Merit LT 100 MEN	4.62
B&H LT 100 MEN	4.61
Marlboro LT 100 MEN	4.49
Va. Slims LT 100 MN	4.48
Newport LT 100	4.34

*98 Low Delivery, Menthol 100 smokers (900248U).

Products not connected by a "side bar" differ from each other by \geq 95% C.L.

26191/42

620944641

MENTHOL MAPPING - ULTRA-M 100

UNSCREENED

<u>DRAW</u>		<u>MOUTHFUL OF SMOKE</u>		<u>IMPACT</u>	
<u>PRODUCT</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MEAN</u>	<u>PRODUCT</u>	<u>MEAN</u>
Carlton UL 100 MEN	4.77	Triumph UL 100 MEN	4.83	Triumph UL 100 MEN	4.37
Salem UL 100	4.59	B&H Deluxe UL 100 M	4.54	Now UL 100 MEN	4.37
Merit UL 100 MEN	4.52	KOOL DELUXE UL 100	4.40	B&H Deluxe UL 100 M	4.27
Va. Slims UL 100 MN	4.43	Va. Slims UL 100 MN	4.38	Merit UL 100 MEN	4.20
KOOL DELUXE UL 100	4.40	Salem UL 100	4.35	Salem UL 100	4.18
B&H Deluxe UL 100 M	4.30	Merit UL 100 MEN	4.33	KOOL DELUXE UL 100	4.15
Now UL 100 MEN	4.26	Now UL 100 MEN	4.32	Va. Slims UL 100 MN	3.98
Triumph UL 100 MEN	4.24	Carlton UL 100 MEN	3.73	Carlton UL 100 MEN	3.76

*89 Low Delivery, Menthol 100 smokers (900249U).

Products not connected by a "side bar" differ from each other by \geq 95% C.L.

26191/46

620944642

MENTHOL MAPPING - ULTRA-M 100

UNSCREENED

IRRITATION

<u>PRODUCT</u>	<u>MEAN</u>
Now UL 100 MEN	4.14
B&H Deluxe UL 100 M	4.04
Triumph UL 100 MEN	3.97
Salem UL 100	3.95
Merit UL 100 MEN	3.93
KOOL DELUXE UL 100	3.82
Va. Slims UL 100 MN	3.80
Carlton UL 100 MEN	3.63

TOBACCO TASTE

<u>PRODUCT</u>	<u>MEAN</u>
Triumph UL 100 MEN	4.87
Salem UL 100	4.56
Merit UL 100 MEN	4.42
Now UL 100 MEN	4.29
KOOL DELUXE UL 100	4.21
Va. Slims UL 100 MN	4.15
B&H Deluxe UL 100 M	4.15
Carlton UL 100 MEN	3.98

MENTHOL TASTE

<u>PRODUCT</u>	<u>MEAN</u>
Now UL 100 MEN	5.64
Va. Slims UL 100 MN	5.38
B&H Deluxe UL 100 M	5.36
KOOL DELUXE UL 100	5.22
Carlton UL 100 MEN	5.19
Merit UL 100 MEN	5.06
Salem UL 100	4.98
Triumph UL 100 MEN	4.60

*89 Low Delivery, Menthol 100 smokers (900249U).

Products not connected by a "side bar" differ from each other by \geq 95% C.L.

26191/47

620944643

MENTHOL MAPPING - LD-M 100

UNSCREENED

AFTERTASTE

TOBACCO/MENTHOL BALANCE

COOLING EFFECT

PRODUCT	MEAN	PRODUCT	MEAN	PRODUCT	MEAN
Now UL 100 MEN	5.35	Now UL 100 MEN	5.78	Now UL 100 MEN	4.82
B&H Deluxe UL 100 M	5.09	Va. Slims UL 100 MN	5.54	Triumph UL 100 MEN	4.54
Va. Slims UL 100 MN	5.04	Carlton UL 100 MEN	5.46	B&H Deluxe UL 100 M	4.53
KOOL DELUXE UL 100	4.90	B&H Deluxe UL 100 M	5.40	Salem UL 100	4.46
Carlton UL 100 MEN	4.90	KOOL DELUXE UL 100	5.30	Merit UL 100 MEN	4.44
Merit UL 100 MEN	4.82	Merit UL 100 MEN	5.19	Va. Slims UL 100 MN	4.39
Salem UL 100	4.60	Salem UL 100	5.09	KOOL DELUXE UL 100	4.32
Triumph UL 100 MEN	4.31	Triumph UL 100 MEN	4.84	Carlton UL 100 MEN	4.31

*89 Low Delivery, Menthol 100 smokers (9002490).

Products not connected by a "side bar" differ from each other by $\geq 95\%$ C.L.

26191/48

620944644

MENTHOL MAPPING - ULTRA-M 100

SCREENED

COOLING EFFECT

<u>PRODUCT</u>	<u>MEAN</u>
Now UL 100 MEN	5.73
B&H Deluxe UL 100 M	5.42
Carlton UL 100 MEN	5.24
Va. Slims UL 100 MN	5.16
KOOL DELUXE UL 100	4.98
Merit UL 100 MEN	4.82
Salem UL 100	4.68
Triumph UL 100 MEN	3.98

(40)

TOBACCO/MENTHOL BALANCE

<u>PRODUCT</u>	<u>MEAN</u>
Now UL 100 MEN	6.25
Va. Slims UL 100 MN	5.78
Carlton UL 100 MEN	5.75
B&H Deluxe UL 100 M	5.72
KOOL DELUXE UL 100	5.59
Merit UL 100 MEN	5.28
Salem UL 100	5.20
Triumph UL 100 MEN	4.56

(46)

AFTERTASTE

<u>PRODUCT</u>	<u>MEAN</u>
Now UL 100 MEN	5.16
B&H Deluxe UL 100 M	4.73
Salem UL 100	4.70
Triumph UL 100 MEN	4.68
Merit UL 100 MEN	4.64
Va. Slims UL 100 MN	4.58
KOOL DELUXE UL 100	4.50
Carlton UL 100 MEN	4.32

(40)

*Number of Low Delivery, Menthol 100 smokers retained (900249S).

Products not connected by a "side bar" differ from each other by \geq 95% C.L.

26191/51

620944645

APPENDIX D

PANEL AND DEMOGRAPHIC BREAKDOWNS

620944646

Test Details

Study I.D.: 900231
Products : Full Flavor, Menthol KS
Smokers : Full Flavor, Menthol KS

Brand Breakdown of Smokers

<u>Company</u>	<u>Brand</u>	<u>Number of Panelists</u>
B&W (31%)	KOOL KS	30
	RICHLAND KS (M)	2
PM (4%)	Marlboro KS (M)	4
RJR (29%)	Salem KS	30
LOR (34%)	Newport KS	36
Other (2%)	Generic FF KS (M)	2
	Total	104

Demographic Summary

	<u>Number</u>	<u>Percent</u>
Male	45	43
Female	59	57
21 - 35	49	47
36 +	55	53
Black	78	75
White	26	25

Test Details

Study I.D.: 900238
Products : Low Delivery, Menthol KS
Smokers : Full Flavor, Menthol KS

Brand Breakdown of Smokers

<u>Company</u>	<u>Brand</u>	<u>Number of Panelists</u>
B&W (31%)	KOOL KS	29
	RICHLAND KS (M)	2
PM (4%)	Marlboro KS (M)	4
RJR (29%)	Salem KS	29
LOR (34%)	Newport KS	34
Other (2%)	Generic FF KS (M)	<u>2</u>
	Total	100

Demographic Summary

	<u>Number</u>	<u>Percent</u>
Male	47	47
Female	53	53
21 - 35	58	58
36 +	42	42
Black	75	75
White	25	25

Test Details

Study I.D.: 900241
Products : Low Delivery, Menthol KS
Smokers : Low Delivery, Menthol KS

Brand Breakdown of Smokers

<u>Company</u>	<u>Brand</u>	<u>Number of Panelists</u>
B&W (43%)	BELAIR Lts KS	4
	KOOL Lts KS	6
	KOOL Milds KS	23
PM (10%)	Merit Lts KS (M)	8
RJR (42%)	Doral Lts KS (M)	11
	Salem Lts KS	19
	Vantage Lts KS (M)	2
Other (5%)	Generic Lts KS (M)	4
	Total	77

Demographic Summary

	<u>Number</u>	<u>Percent</u>
Male	31	40
Female	46	60
21 - 35	40	52
36 +	37	48
Black	46	60
White	31	40

Test Details

Study I.D.: 900245
Products : Ultra Low Delivery, Menthol KS
Smokers : Low Delivery, Menthol KS

Brand Breakdown of Smokers

<u>Company</u>	<u>Brand</u>	<u>Number of Panelists</u>
B&W (43%)	BELAIR Lts KS	4
	KOOL Lts KS	6
	KOOL Milds KS	22
PM (10%)	Merit Lts KS (M)	7
RJR (42%)	Doral Lts KS (M)	10
	Salem Lts KS	19
	Vantage Lts KS (M)	2
Other (5%)	Generic Lts KS (M)	4
	Total	74

Demographic Summary

	<u>Number</u>	<u>Percent</u>
Male	30	41
Female	44	59
21 - 35	37	50
36 +	37	50
Black	44	59
White	30	41

Test Details

Study I.D.: 900246
Products : Full Flavor, Menthol 100
Smokers : Full Flavor, Menthol 100

Brand Breakdown of Smokers

<u>Company</u>	<u>Brand</u>	<u>Number of Panelists</u>
B&W (27%)	KOOL 100	30
	RICHLAND 100 (M)	1
PM (21%)	Benson & Hedges 100 (M)	10
	Virginia Slims 100 (M)	13
RJR (29%)	Doral 100 (M)	5
	Salem 100	28
LOR (21%)	Newport 100	23
Other (2%)	Malibu 100 (M)	2
	Total	112

Demographic Summary

	<u>Number</u>	<u>Percent</u>
Male	84	75
Female	28	25
21 - 35	62	55
36 +	50	45
Black	83	74
White	29	26

Test Details

Study I.D.: 900247
Products : Low Delivery, Menthol 100
Smokers : Full Flavor, Menthol 100

Brand Breakdown of Smokers

<u>Company</u>	<u>Brand</u>	<u>Number of Panelists</u>
B&W (28%)	KOOL 100	28
	RICHLAND 100 (M)	1
PM (20%)	Benson & Hedges 100 (M)	9
	Virginia Slims 100 (M)	12
RJR (29%)	Doral 100 (M)	5
	Salem 100	26
LOR (21%)	Newport 100	22
Other (2%)	Malibu 100 (M)	2
	Total	105

Demographic Summary

	<u>Number</u>	<u>Percent</u>
Male	27	26
Female	78	74
21 - 35	56	53
36 +	49	47
Black	76	72
White	29	28

Test Details

Study I.D.: 900248
Products : Low Delivery, Menthol 100
Smokers : Low Delivery, Menthol 100

Brand Breakdown of Smokers

<u>Company</u>	<u>Brand</u>	<u>Number of Panelists</u>
B&W (25%)	BELAIR Lts 100	5
	KOOL Lts 100	8
	KOOL Milds 100	12
PM (30%)	Alpine Lts 100	2
	Benson & Hedges Lts 100 (M)	3
	Bristol Lts 100 (M)	2
	Cambridge Lts 100 (M)	6
	Merit Lts 100 (M)	7
	Players Lts 100 (M)	3
	Virginia Slims Lts 100 Box (M)	6
RJR (29%)	Century Lts 100 (M)	1
	Doral Lts 100 (M)	12
	Salem Lts 100	15
LOR (7%)	Kent GL 100 (M)	1
	Newport Lts 100	1
	Satin Lts 100 (M)	5
LM (9%)	Generic Lts 100 (M)	7
	Pyramid Lts 100 (M)	<u>2</u>
	Total	98

Demographic Summary

	<u>Number</u>	<u>Percent</u>
Male	26	27
Female	72	73
21 - 35	34	35
36 +	68	65
Black	51	52
White	47	48

Test Details

Study I.D.: 900249
Products : Ultra Low Delivery, Menthol 100
Smokers : Low Delivery, Menthol 100

Brand Breakdown of Smokers

<u>Company</u>	<u>Brand</u>	<u>Number of Panelists</u>
B&W (25%)	BELAIR Lts 100	5
	KOOL Lts 100	7
	KOOL Milds 100	10
PM (29%)	Alpine Lts 100	2
	Benson & Hedges Lts 100 (M)	3
	Bristol Lts 100 (M)	1
	Cambridge Lts 100 (M)	5
	Merit Lts 100 (M)	6
	Players Lts 100 (M)	3
	Virginia Slims Lts 100 Box (M)	6
RJR (29%)	Century Lts 100 (M)	1
	Doral Lts 100 (M)	11
	Salem Lts 100	14
LOR (8%)	Kent GL 100 (M)	1
	Newport Lts 100	1
	Satin Lts 100 (M)	5
LM (9%)	Generic Lts 100 (M)	6
	Pyramid Lts 100 (M)	2
	Total	89

Demographic Summary

	<u>Number</u>	<u>Percent</u>
Male	23	26
Female	66	74
21 - 35	32	36
36 +	57	63
Black	46	52
White	43	48

APPENDIX E

ATTRIBUTE SHEET

620944655

CONSUMER RESEARCH SERVICES

PANELIST ID

STUDY ID
9 0 0 2 3 1

DAY
0 1

TRIAL
0 1

GROUP
N

	1	2	3	4	5	6	7	8	9	
<u>DRAW</u>										
easy	1	2	3	4	5	6	7	8	9	hard
<u>MONTHFUL OF SMOKE</u>										
a little	1	2	3	4	5	6	7	8	9	a lot
<u>IMPACT</u>										
a little	1	2	3	4	5	6	7	8	9	a lot
<u>IRRITATION</u>										
a little	1	2	3	4	5	6	7	8	9	a lot
<u>TOBACCO TASTE</u>										
a little	1	2	3	4	5	6	7	8	9	a lot
<u>MENTHOL TASTE</u>										
a little	1	2	3	4	5	6	7	8	9	a lot
<u>COOLING EFFECT</u>										
a little	1	2	3	4	5	6	7	8	9	a lot
<u>TOBACCO/MENTHOL BALANCE</u>										
mainly tobacco	1	2	3	4	5	6	7	8	9	mainly menthol
<u>AFTERTASTE</u>										
a little	1	2	3	4	5	6	7	8	9	a lot

APPENDIX F

ANALYTICALS

620944657

**MENTHOL
MAPPING
STUDY**

1990

(ANALYTICALS)

620944658

FULL FLAVOR KS

620944659

FULL FLAVOR MENTHOL KS

	ALPINE FF-M KS	BELAIR FF-M KS (VFN)	DOORAL FF-M KS	KOOL FF-MKS	MALIBU FF-M KS	MARLBORO FF-M KS
<u>*TPM SMOKE ANALYSIS*</u>						
Tar (mg/cig)	16.8	14.6	15.5	16.6	15.5	15.6
Tar/Puff	2.18	1.76	2.07	2.34	1.72	2.03
Nicotine (mg/cig)	1.14	1.12	1.16	1.20	1.18	1.12
Nic/Puff	0.15	0.13	0.15	0.17	0.13	0.15
CO (mg/cig)	13.7	11.8	13.8	14.0	12.1	13.9
Puffs (per cig)	7.7	8.3	7.5	7.1	9.0	7.7
Filter Eff. (%)	34.1	39.7	36.3	32.7	31.3	34.7
Ventilation (%)	0.0	18.3	7.6	0.0	15.4	0.0
T5 Tar (mg/cig)	25.5	29.6	26.3	24.7	26.7	23.9
CO/Tar	0.82	0.81	0.89	0.84	0.78	0.89
Tar/Nic	14.74	13.04	13.36	13.83	13.14	13.93

SMOKE MENTHOL

Puffs (per cig)	7.6	7.3	7.3	6.8	8.2	7.6
Menthol (mg/cig)	0.48	0.56	0.40	0.44	0.59	0.57
Menthol (mg/puff)	0.07	0.07	0.06	0.07	0.07	0.08

TOBACCO ANALYSIS

Moisture (%)	11.8	13.6	12.7	12.8	13.1	13.1
Glycerin (%)	1.57	2.57	0.91	2.09	1.62	1.67
PG (%)	1.68	1.03	1.08	0.95	0.91	1.83
Menthol (%)	0.42	0.52	0.37	0.42	0.51	0.45
Alkaloid (%)	2.00	2.34	2.23	2.24	1.91	2.15
Red. Sugar (%)	8.3	7.2	7.8	7.0	8.7	8.7
Total Sugar (%)	10.5	10.2	9.9	10.3	11.3	10.5
Nitrate (%)	1.09	1.00	1.08	1.14	1.01	1.05
Tobacco Ammonia (%)	0.10	0.14	0.16	0.14	0.26	0.15
PSO +9	41.2	51.5	38.3	48.7	42.4	46.6
PSO -14	23.1	20.4	25.1	21.8	21.5	20.5

CIGARETTE ANALYSIS

Cigarette wgt. (mg/cig)	934	945	888	936	1055	967
Tobacco wgt. (mg/cig)	722	731	671	720	823	747
Non-tobacco wgt. (mg/cig)	212	214	217	216	231	220
Circum. (mm)	24.9	24.8	24.8	24.8	25.0	24.7
Hardness (as is)	1.39	1.71	1.77	1.73	1.94	1.56
Hardness (cor.)	1.87	1.70	1.99	1.92	2.04	1.68
Firmness (as is)	119	150	156	152	172	135
Firmness (cor.)	165	149	177	170	182	147
PO - cig open	4.5	4.6	4.3	4.5	4.3	4.7
PO - cig sealed	4.5	5.4	4.6	4.5	4.9	4.7
PO - tob sec	2.3	2.6	2.0	2.3	2.6	2.2
PO - filter	2.2	2.8	2.7	2.2	2.3	2.5
Paper Citrate (%)	0.47	0.48	0.49	0.76	0.79	1.80

620944660

FULL FLAVOR MENTHOL KS

	NEWPORT FF-M KS	PLAYERS FF-M KS BOX	PYRAMID FF-M KS	RICHLAND FF-M KS	SALEM FF-M KS	GPC FF-M KS GENERIC
<u>*TPM SMOKE ANALYSIS*</u>						
Tar (mg/cig)	17.8	11.5	12.6	16.3	16.6	16.1
Tar/Puff	2.28	1.37	1.75	2.43	2.13	2.24
Nicotine (mg/cig)	1.31	0.85	0.96	1.12	1.30	1.05
Nic/Puff	0.17	0.10	0.13	0.17	0.17	0.15
CO (mg/cig)	16.5	10.9	11.7	14.7	13.3	13.4
Puffs (per cig)	7.8	8.4	7.2	6.7	7.8	7.2
Filter Eff. (%)	35.0	45.1	35.0	29.9	36.0	29.9
Ventilation (%)	0.0	32.0	0.0	0.0	0.0	0.0
T5 Tar (mg/cig)	27.4	30.8	19.4	23.3	25.9	23.0
CO/Tar	0.93	0.95	0.93	0.90	0.80	0.83
Tar/Nic	13.59	13.53	13.13	14.55	12.77	15.33

SMOKE MENTHOL

Puffs (per cig)	7.2	8.2	7.1	6.8	7.3	6.8
Menthol (mg/cig)	0.44	0.56	0.42	0.49	0.58	0.5
Menthol (mg/puff)	0.06	0.07	0.06	0.07	0.08	0.07

TOBACCO ANALYSIS

Moisture (%)	12.7	13.4	12.1	12.3	12.2	12.8
Glycerin (%)	2.49	2.27	1.56	1.92	1.66	1.69
PG (%)	1.10	1.84	0.85	0.94	0.95	0.87
Menthol (%)	0.34	0.63	0.42	0.44	0.47	0.42
Alkaloid (%)	2.37	2.04	2.03	2.17	2.47	1.99
Red. Sugar (%)	8.8	7.9	8.9	7.3	7.1	7.3
Total Sugar (%)	10.5	11.8	10.9	10.1	9.3	9.9
Nitrate (%)	1.20	1.05	0.96	1.30	1.30	1.44
Tobacco Ammonia (%)	0.18	0.26	0.10	0.12	0.16	0.12
PSD +9	34.4	49.4	41.6	45.6	42.5	47.1
PSD -14	29.5	18.4	24.6	24.7	20.0	21.9

CIGARETTE ANALYSIS

Cigarette wgt. (mg/cig)	950	943	858	921	945	890
Tobacco wgt. (mg/cig)	736	688	626	704	719	680
Non-tobacco wgt. (mg/cig)	214	254	241	216	226	210
Circum. (mm)	24.8	24.9	24.6	24.8	24.9	24.7
Hardness (as is)	1.99	1.80	1.92	1.84	2.00	2.01
Hardness (cor.)	2.22	1.83	2.31	2.18	2.36	2.20
Firmness (as is)	177	158	170	162	178	179
Firmness (cor.)	214	161	208	195	213	197
PO - cig open	5.1	4.1	4.5	4.6	4.5	4.1
PO - cig sealed	5.1	5.5	4.5	4.6	4.4	4.1
PO - tob sec	2.6	2.0	1.9	2.3	1.9	2.0
PO - filter	2.5	3.5	2.6	2.3	2.6	2.1
Paper Citrate (%)	0.61	0.38	0.27	0.68	0.46	0.43

620944661

FULL PAVOR 100

620944662

FULL FLAVOR MENTHOL 100

ALPINE FF-M 100
 BMH FF-M 100
 BELAIR FF-M 100 (VFM)
 DORAL FF-M 100
 KOOL FF-M 100
 NEWPORT FF-M-100

TPM SMOKE ANALYSIS

Tar (mg/cig)	15.4	16.5	14.2	15.9	15.9	19.2
Tar/Puff	1.69	1.67	1.53	1.94	1.94	2.16
Nicotine (mg/cig)	1.10	1.15	1.16	1.21	1.17	1.38
Nic/Puff	0.12	0.12	0.12	0.15	0.14	0.16
CO (mg/cig)	12.5	12.1	12.3	15.0	14.6	18.1
Puffs (per cig)	9.1	9.9	9.3	8.2	8.2	8.9
Filter Eff. (%)	33.0	38.0	42.9	41.0	36.8	33.8
Ventilation (%)	12.8	15.3	20.0	0.0	0.0	0.0
T5 Tar (mg/cig)	26.4	31.4	30.8	26.9	25.2	29.0
CO/Tar	0.81	0.73	0.87	0.94	0.92	0.94
Tar/Nic	14.00	14.35	12.24	13.14	13.59	13.91

SMOKE MENTHOL

Puffs (per cig)	9.1	9.7	9.0	8.0	7.8	8.5
Menthol (mg/cig)	0.50	0.62	0.42	0.33	0.41	0.48
Menthol (mg/puff)	0.06	0.06	0.05	0.04	0.05	0.06

TOBACCO ANALYSIS

Moisture (%)	13.4	13.6	13.4	12.3	13.2	12.8
Glycerin (%)	1.48	2.33	2.50	0.87	1.96	2.53
PG (%)	1.70	2.04	0.96	0.99	0.94	1.15
Menthol (%)	0.49	0.53	0.48	0.39	0.41	0.35
Alkaloid (%)	2.09	1.96	2.44	2.31	2.28	2.30
Red. Sugar (%)	8.9	7.5	6.7	8.2	7.2	9.0
Total Sugar (%)	10.6	11.6	10.4	10.2	10.1	11.4
Nitrate (%)	1.10	0.92	1.19	1.35	1.31	1.38
Tobacco Ammonia (%)	0.12	0.30	0.16	0.14	0.15	0.19
P50 +9	51.0	42.6	39.2	41.6	51.4	33.9
P50 -14	18.1	23.0	26.1	20.6	19.5	30.2

CIGARETTE ANALYSIS

Cigarette wgt. (mg/cig)	1107	1137	1088	1017	1082	1118
Tobacco wgt. (mg/cig)	828	871	827	726	820	825
Non-tobacco wgt. (mg/cig)	279	265	261	291	262	293
Circum. (mm)	24.7	24.7	24.6	24.8	24.8	24.9
Hardness (as is)	1.93	1.92	2.20	1.80	1.87	2.02
Hardness (cor.)	1.96	1.91	2.24	2.12	1.96	2.21
Firmness (as is)	171	170	197	158	165	180
Firmness (cor.)	174	169	201	189	174	198
P0 - cig open	4.5	4.5	5.1	5.0	5.2	5.0
P0 - cig sealed	5.0	5.1	6.0	5.0	5.2	5.0
P0 - tob sec	2.4	2.3	2.7	1.8	2.5	2.4
P0 - filter	2.7	2.8	3.3	3.2	2.6	2.6
Paper Citrate (%)	0.35	0.38	0.36	0.43	0.47	0.67

620944663

FULL FLAVOR MENTHOL 100

	PLAYERS FF-M 100	PYRAMID FF-M 100	RICHLAND FF-M 100	SALEM FF-M 100	GPC FF-M 100 GENERIC	VA SLIM FF-M 100
<u>*TPM SMOKE ANALYSIS*</u>						
Tar (mg/cig)	13.6	15.3	16.1	18.4	14.4	15.0
Tar/Puff	1.64	1.68	2.01	1.88	1.87	1.63
Nicotine (mg/cig)	1.00	1.11	1.12	1.21	0.97	1.03
Nic/Puff	0.12	0.12	0.14	0.12	0.13	0.11
CO (mg/cig)	11.7	13.7	13.6	16.5	13.6	11.3
Puffs (per cig)	8.3	9.1	8.0	9.8	7.7	9.2
Filter Eff. (%)	37.6	33.9	37.6	37.1	38.6	36.1
Ventilation (%)	23.2	0.0	0.0	11.8	0.0	19.4
T5 Tar (mg/cig)	28.4	23.1	25.8	33.2	23.5	29.1
CO/Tar	0.86	0.90	0.84	0.90	0.94	0.75
Tar/Nic	13.60	13.78	14.38	15.21	14.85	14.56
<u>*SMOKE MENTHOL*</u>						
Puffs (per cig)	7.8	9.1	8.0	9.3	7.4	8.9
Menthol (mg/cig)	0.63	0.24	0.60	0.51	0.37	0.57
Menthol (mg/puff)	0.08	0.03	0.08	0.05	0.05	0.07
<u>*TOBACCO ANALYSIS*</u>						
Moisture (%)	13.6	11.8	12.9	13.2	13.6	13.8
Glycerin (%)	2.26	1.53	1.92	1.66	1.82	2.31
PG (%)	1.62	0.87	1.01	0.66	0.88	1.83
Menthol (%)	0.62	0.44	0.54	0.42	0.41	0.55
Alkaloid (%)	1.99	1.99	2.24	2.04	2.13	1.94
Red. Sugar (%)	7.5	8.3	7.3	8.0	7.0	8.4
Total Sugar (%)	11.2	10.9	9.9	9.8	9.6	12.2
Nitrate (%)	0.98	1.13	1.18	1.32	1.42	0.98
Tobacco Ammonia (%)	0.27	0.09	0.12	0.16	0.13	0.27
P50 +9	36.1	34.5	47.4	41.5	47.8	47.0
P50 ~14	29.6	30.1	23.8	22.6	23.1	19.9
<u>*CIGARETTE ANALYSIS*</u>						
Cigarette wgt. (mg/cig)	1043	1022	1065	1122	1029	1002
Tobacco wgt. (mg/cig)	755	736	805	846	752	747
Non-tobacco wgt. (mg/cig)	289	286	260	276	277	256
Circum. (mm)	24.1	24.7	24.8	24.9	24.9	23.0
Hardness (as is)	2.12	1.88	1.81	1.82	2.33	1.91
Hardness (cor.)	2.10	2.36	1.97	1.90	2.30	1.82
Firmness (as is)	189	166	159	160	210	169
Firmness (cor.)	187	213	175	168	207	160
P0 - cig open	4.1	4.8	5.1	4.4	5.2	4.8
P0 - cig sealed	5.1	4.8	5.1	4.9	5.2	5.7
P0 - tob sec	2.3	2.3	2.4	2.2	2.3	2.8
P0 - filter	2.8	2.5	2.8	2.7	2.9	2.9
Paper Citrate (%)	1.84	0.31	0.40	0.40	0.34	0.48

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LIGHTS KS

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LIGHTS MENTHOL KS

ALPINE
LTS-M KS

BELAIR
LTS-M KS
(VFH)

BELAIR
LTS-M KS

BRISTOL
LTS-M KS

CAMBRIDGE
LTS-M KS

DOURAL
LTS-M KS

TPM SMOKE ANALYSIS

Tar (mg/cig)	9.7	10.1	10.3	11.8	9.7
Tar/Puff	1.24	1.53	1.54	1.49	1.28
Nicotine (mg/cig)	0.73	0.81	0.79	0.82	0.74
Nic/Puff	0.09	0.10	0.12	0.10	0.10
CO (mg/cig)	8.9	8.4	10.0	9.7	8.8
Puffs (per cig)	7.8	7.8	6.7	7.9	7.6
Filter Eff. (%)	45.0	48.4	46.8	44.6	47.9
Ventilation (%)	33.9	36.1	21.9	22.9	39.6
T5 Tar (mg/cig)	26.7	27.3	24.8	27.6	30.8
CO/Tar	0.92	0.93	0.97	0.82	0.91
Tar/Nic	13.29	11.25	13.04	14.39	13.11

SMOKE MENTHOL

Puffs (per cig)	7.4	6.5	6.5	7.8	7.4
Menthol (mg/cig)	0.36	0.43	0.35	0.55	0.41
Menthol (mg/puff)	0.05	0.06	0.05	0.07	0.06

TOBACCO ANALYSIS

Moisture (%)	13.0	12.8	12.5	13.2	12.7
Glycerin (%)	1.59	1.63	1.24	2.03	1.00
PG (%)	1.73	0.60	1.84	2.26	1.28
Menthol (%)	0.68	0.37	0.57	0.65	0.65
Alkaloid (%)	2.05	2.25	2.09	1.88	2.05
Red. Sugar (%)	8.8	7.2	7.3	7.1	8.9
Total Sugar (%)	10.4	8.9	8.4	11.4	11.9
Nitrate (%)	1.10	1.34	1.13	1.02	1.26
Tobacco Ammonia (%)	0.12	0.14	0.22	0.28	0.13
PS0 +9	46.4	49.1	48.7	44.6	36.7
PS0 -14	20.3	22.3	17.7	22.0	24.1

CIGARETTE ANALYSIS

Cigarette wgt. (mg/cig)	929	930	873	944	896
Tobacco wgt. (mg/cig)	662	666	608	673	624
Non-tobacco wgt. (mg/cig)	268	264	265	271	272
Circum. (mm)	24.9	24.8	24.7	24.8	24.9
Hardness (as is)	1.65	2.10	1.71	1.84	2.12
Hardness (cor.)	1.80	2.10	2.17	1.94	2.33
Firmness (as is)	144	187	166	162	189
Firmness (cor.)	158	187	194	172	210
PO - cig open	4.2	4.7	4.8	4.4	3.4
PO - cig sealed	5.7	6.3	5.7	5.3	4.8
PO - tob sec	2.3	2.3	1.4	2.0	1.4
PO - filter	3.4	4.0	4.2	3.3	3.4
Paper Citrate (%)	0.35	0.40	0.42	0.42	0.60

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LIGHTS MENTHOL KS

	KENT GOLDEN LT-M KS	KOOL MILDS LT-M KS	KOOL LT-M KS	KOOL DLX LT-M KS	MARLBORO LT-M KS BOX	MERIT LT-M KS
TPM SMOKE ANALYSIS						
Tar (mg/cig)	8.2	10.7	8.7	8.7	9.3	8.5
Tar/Puff	1.24	1.47	1.18	1.13	1.27	1.00
Nicotine (mg/cig)	0.71	0.85	0.68	0.83	0.72	0.61
Nic/Puff	0.11	0.12	0.09	0.11	0.10	0.07
CO (mg/cig)	9.3	10.0	7.7	8.5	8.3	8.4
Puffs (per cig)	6.6	7.3	7.4	7.7	7.9	8.5
Filter Eff. (%)	49.9	41.8	48.9	50.8	49.1	53.7
Ventilation (%)	30.2	23.4	33.2	32.3	27.7	37.8
T5 Tar (mg/cig)	23.4	24.0	25.5	26.1	25.9	29.5
CO/Tar	1.13	0.93	0.89	0.98	0.89	0.99
Tar/Nic	11.55	12.59	12.79	10.48	12.92	13.93

SMOKE MENTHOL

Puffs (per cig)	6.5	7.1	7.3
Menthol (mg/cig)	0.48	0.34	0.28
Menthol (mg/puff)	0.07	0.05	0.04

TOBACCO ANALYSIS

Moisture (%)	12.7	13.3	12.9	14.1	13.2	14.1
Glycerin (%)	2.47	1.97	1.90	2.61	1.64	2.28
PG (%)	1.03	0.91	1.03	0.88	1.74	1.87
Menthol (%)	0.44	0.50	0.52	0.62	0.63	0.65
Alkaloid (%)	2.57	2.38	2.20	2.70	2.01	1.95
Red. Sugar (%)	6.7	7.1	7.4	8.7	8.7	8.6
Total Sugar (%)	10.8	10.7	11.1	11.0	10.8	11.5
Nitrate (%)	1.31	1.27	1.37	1.08	1.30	1.20
Tobacco Ammonia (%)	0.23	0.17	0.18	0.19	0.12	0.24
PSD +9	35.7	48.3	50.8	52.1	48.0	53.7
PSD -14	28.1	22.5	20.4	19.3	19.8	16.2

CIGARETTE ANALYSIS

Cigarette wgt. (mg/cig)	929	941	909	931	924	965
Tobacco wgt. (mg/cig)	665	687	645	653	656	689
Non-tobacco wgt. (mg/cig)	263	254	265	278	268	276
Circum. (mm)	24.9	24.8	24.8	24.7	24.9	24.8
Hardness (as is)	2.20	1.66	1.92	2.46	1.84	1.89
Hardness (cor.)	2.44	1.73	2.08	2.29	1.93	1.72
Firmness (as is)	197	145	170	222	162	167
Firmness (cor.)	220	152	186	206	171	151
P0 - cig open	5.1	4.9	4.9	5.4	4.3	4.7
P0 - cig sealed	6.3	6.0	6.4	7.0	5.5	6.4
P0 - tob sec	1.9	2.8	2.1	2.3	1.8	1.9
P0 - filter	4.4	3.2	4.3	4.7	3.7	4.5
Paper Citrate (%)	1.71	0.51	0.46	0.42	0.75	0.46

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LIGHTS MENTHOL KS

TPM SMOKE ANALYSIS

	NEWPORT LTS-M KS	SALEM LTS-M KS	VANTAGE LTS-M KS	GPC GENERIC LTS M-KS
Tar (mg/cig)	8.2	9.9	9.5	9.8
Tar/Puff	1.21	1.41	1.28	1.58
Nicotine (mg/cig)	0.75	0.73	0.71	0.79
Nic/puff	0.11	0.10	0.10	0.13
CO (mg/cig)	9.5	10.5	10.9	9.5
Puffs (per cig)	6.8	7.0	7.4	6.2
Filter Eff. (%)	48.4	48.6	48.1	39.6
Ventilation (%)	30.2	22.2	30.9	19.0
TS Tar (mg/cig)	22.8	24.8	26.5	20.0
CO/Tar	1.16	1.06	1.15	0.97
Tar/Nic	10.93	13.56	13.38	12.41

SMOKE MENTHOL

Puffs (per cig)	6.5	6.9	7.3	6.3
Menthol (mg/cig)	0.24	0.40	0.28	0.25
Menthol (mg/puff)	0.04	0.06	0.04	0.04

TOBACCO ANALYSIS

Moisture (%)	12.6	13.7	13.9	12.9
Glycerin (%)	2.49	1.49	1.77	1.74
PG (%)	1.11	1.13	1.14	0.87
Menthol (%)	0.44	0.60	0.60	0.40
Alkaloid (%)	2.39	2.11	2.03	2.11
Red. Sugar (%)	9.1	8.3	8.0	6.7
Total Sugar (%)	10.7	10.1	9.9	9.8
Nitrate (%)	1.27	1.48	1.27	1.51
Tobacco Ammonia (%)	0.19	0.16	0.20	0.13
PSD +9	35.7	46.2	42.3	41.9
PSD -14	28.8	17.9	18.5	26.3

CIGARETTE ANALYSIS

Cigarette wgt. (mg/cig)	947	928	1085	872
Tobacco wgt. (mg/cig)	680	643	697	621
Non-tobacco wgt. (mg/cig)	267	285	388	251
Circum. (mm)	24.7	25.0	24.9	24.8
Hardness (as is)	2.00	2.29	2.31	2.10
Hardness (cor.)	2.26	2.25	2.21	2.27
Firmness (as is)	178	206	208	187
Firmness (cor.)	203	202	198	204
PO - cig open	5.3	5.0	5.1	4.2
PO - cig sealed	6.5	5.9	6.3	4.9
PO - tob sec	2.2	1.6	1.6	1.9
PO - filter	4.3	4.3	4.7	2.9
Paper Citrate (%)	0.52	0.55	0.69	0.36

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LIGHTS 100

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LIGHTS MENTHOL 100

ALPINE LTS-M 100	BMH LTS-M 100	BELAIR LTS-M 100	BELAIR LTS-M 100 (VFM)	BRISTOL LTS-M 100	CAMBRIDGE LTS-M 100
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TPM SMOKE ANALYSIS

Tar (mg/cig)	10.3	10.6	9.3	8.6	9.9	11.6
Tar/Puff	1.14	1.08	1.12	0.96	1.18	1.23
Nicotine (mg/cig)	0.82	0.77	0.71	0.80	0.78	0.87
Nic/Puff	0.09	0.08	0.09	0.09	0.09	0.09
CO (mg/cig)	11.0	9.9	8.2	8.5	11.8	11.8
Puffs (per cig)	9.0	9.8	8.3	9.0	8.4	9.4
Filter Eff. (%)	45.4	48.9	38.7	52.0	52.5	49.1
Ventilation (%)	30.4	31.7	34.1	40.0	31.1	25.0
T5 Tar (mg/cig)	27.1	30.4	23.0	29.9	30.2	30.4
CO/Tar	1.07	0.93	0.88	0.99	1.20	1.02
Tar/Nic	12.56	13.77	13.10	10.75	12.69	13.33

SMOKE MENTHOL

Puffs (per cig)	8.6	10.1	8.3	9.2	9.4
Menthol (mg/cig)	0.47	0.65	0.29	0.46	0.42
Menthol (mg/puff)	0.05	0.06	0.03	0.05	0.05

TOBACCO ANALYSIS

Moisture (%)	13.7	13.3	13.2	12.5	12.8	13.6
Glycerin (%)	1.55	2.37	2.10	2.14	1.12	1.98
PG (%)	1.78	1.93	0.56	0.85	1.74	2.35
Menthol (%)	0.64	0.73	0.43	0.54	0.49	0.69
Alkaloid (%)	2.06	2.08	2.13	2.59	1.94	2.08
Red. Sugar (%)	8.8	8.1	7.4	7.2	6.9	8.4
Total Sugar (%)	10.4	12.9	10.2	11.0	8.6	12.3
Nitrate (%)	1.14	1.13	1.67	1.19	1.17	1.10
Tobacco Ammonia (%)	0.12	0.28	0.16	0.17	0.26	0.32
PSD +9	44.1	46.0	51.3	49.8	46.0	43.4
PSD -14	21.8	19.9	20.3	20.2	19.5	22.2

CIGARETTE ANALYSIS

Cigarette wgt. (mg/cig)	1094	1127	1054	1092	1064	1104
Tobacco wgt. (mg/cig)	781	827	774	798	752	800
Non-tobacco wgt. (mg/cig)	314	301	280	295	313	304
Circum. (mm)	24.8	24.8	24.9	24.8	24.9	24.9
Hardness (as is)	1.92	1.82	2.01	1.81	2.03	1.99
Hardness (cor.)	1.87	1.87	2.08	2.09	2.22	1.97
Firmness (as is)	170	160	179	159	181	177
Firmness (cor.)	165	165	186	186	199	175
PO - cig open	4.8	4.9	4.2	4.9	4.7	5.0
PO - cig sealed	6.3	6.5	5.8	6.9	6.2	6.2
PO - tob sec	2.4	2.3	2.8	2.7	1.8	2.1
PO - filter	3.9	4.2	3.0	4.3	4.4	4.1
Paper Citrate (%)	0.43	0.47	0.38	0.36	0.45	0.46

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LIGHTS MENTHOL 100

CENTURY LTS M-100	DOORAL LTS M-100	KOOL MILDS M-100	KOOL LTS M-100	KOOL DLX LTS-M 100	MARLBORO LTS-M 100 BOX
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TPM SMOKE ANALYSIS

Tar (mg/cig)	11.6	9.6	11.9	8.4	10.5
Tar/Puff	1.43	1.10	1.40	0.92	1.13
Nicotine (mg/cig)	0.86	0.73	0.90	0.70	0.83
Nic/Puff	0.11	0.08	0.11	0.08	0.09
CO (mg/cig)	11.1	11.2	10.8	8.2	10.7
Puffs (per cig)	8.1	8.7	8.5	9.1	9.3
Filter Eff. (%)	44.3	51.4	42.1	52.8	45.8
Ventilation (%)	27.3	34.0	24.6	40.4	32.2
TS Tar (mg/cig)	28.6	29.9	27.3	29.9	28.6
CO/Tar	0.96	1.17	0.91	0.96	1.02
Tar/Nic	13.49	13.15	13.22	12.00	12.65

SMOKE MENTHOL

Puffs (per cig)	8.4	9.1	8.3	9.3	9.3
Menthol (mg/cig)	0.45	0.46	0.41	0.35	0.47
Menthol (mg/puff)	0.05	0.05	0.05	0.04	0.05

TOBACCO ANALYSIS

Moisture (%)	12.6	12.6	12.8	12.9	12.9
Glycerin (%)	0.73	0.74	1.99	2.01	1.69
PG (%)	1.12	1.18	0.95	0.96	1.80
Menthol (%)	0.59	0.63	0.52	0.54	0.67
Alkaloid (%)	2.06	2.22	2.38	2.56	2.25
Red. Sugar (%)	8.0	8.6	7.5	7.2	8.7
Total Sugar (%)	10.8	11.5	10.8	10.7	11.2
Nitrate (%)	1.31	1.22	1.33	1.31	1.20
Tobacco Ammonia (%)	0.12	0.12	0.16	0.17	0.13
PSD +9	36.2	43.2	46.2	49.7	49.2
PSD -14	28.9	19.3	25.1	22.5	19.2

CIGARETTE ANALYSIS

Cigarette wgt. (mg/cig)	986	1058	1100	1085	1082
Tobacco wgt. (mg/cig)	692	755	835	799	772
Non-tobacco wgt. (mg/cig)	295	303	265	286	310
Circum. (mm)	24.1	25.0	24.9	24.8	24.8
Hardness (as is)	1.85	1.98	2.09	1.85	1.58
Hardness (cor.)	2.11	2.22	2.29	2.02	1.74
Firmness (as is)	163	176	186	163	137
Firmness (cor.)	188	199	206	180	159
PO - cig open	4.7	4.6	4.7	4.6	4.5
PO - cig sealed	6.0	6.2	5.8	6.7	6.0
PO - tob sec	2.2	1.6	2.6	2.7	2.2
PO - filter	3.8	4.6	3.2	4.0	3.8
Paper Citrate (%)	0.39	0.41	0.41	1.67	0.45

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LIGHTS MENTHOL 100

MERIT M-100	NEWPORT LTS M-100	PYRAMID LTS M-100	SALEM LTS M-100	VA SLIM LTS M-100	GPC GENERIC LTS-M 100
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TPM SMOKE ANALYSIS

Tar (mg/cig)	10.7	8.7	10.7	8.5	9.0	8.3
Tar/Puff	1.06	0.95	1.19	0.93	1.00	1.04
Nicotine (mg/cig)	0.84	0.76	0.95	0.69	0.69	0.65
Nic/Puff	0.08	0.08	0.11	0.08	0.08	0.08
CO (mg/cig)	10.8	6.9	10.4	9.4	7.8	7.6
Puffs (per cig)	10.1	9.2	9.0	9.1	9.0	8.0
Filter Eff. (%)	48.8	43.3	37.2	54.0	46.8	40.6
Ventilation (%)	35.1	49.9	34.7	42.4	39.3	38.2
TS Tar (mg/cig)	32.2	30.6	26.1	32.1	27.9	22.6
CO/Tar	1.01	0.79	0.97	1.11	0.87	0.92
Tar/Nic	12.74	11.45	11.26	12.32	13.04	12.77

SMOKE MENTHOL

Puffs (per cig)	9.8	8.9	9.3	9.0	9.2	8.4
Menthol (mg/cig)	0.54	0.31	0.41	0.39	0.54	0.27
Menthol (mg/puff)	0.06	0.04	0.05	0.04	0.06	0.03

TOBACCO ANALYSIS

Moisture (%)	13.6	12.3	11.8	13.5	14.2	12.6
Glycerin (%)	2.33	2.42	1.55	1.76	2.40	1.89
PG (%)	1.93	1.11	0.79	1.22	1.94	0.94
Menthol (%)	0.69	0.45	0.45	0.59	0.75	0.42
Alkaloid (%)	2.08	2.57	2.14	2.35	1.94	2.22
Red. Sugar (%)	7.3	8.5	6.9	8.6	8.3	8.0
Total Sugar (%)	12.3	11.0	11.0	11.0	12.4	11.6
Nitrate (%)	1.22	1.37	1.14	1.31	1.11	1.75
Tobacco Ammonia (%)	0.36	0.23	0.08	0.19	0.27	0.13
PSD +9	48.3	36.9	34.9	45.7	52.6	45.3
PSD -14	19.3	27.4	29.5	19.7	16.7	24.7

CIGARETTE ANALYSIS

Cigarette wgt. (mg/cig)	1130	1077	1026	1078	970	1044
Tobacco wgt. (mg/cig)	821	819	741	766	697	762
Non-tobacco wgt. (mg/cig)	310	257	284	312	273	282
Circum. (mm)	24.8	24.8	24.6	25.0	23.0	24.7
Hardness (as is)	1.90	2.02	1.66	2.06	2.09	1.72
Hardness (cor.)	1.87	2.35	2.14	2.05	1.91	1.97
Firmness (as is)	168	180	145	184	186	151
Firmness (cor.)	165	212	191	183	169	175
P0 - cig open	4.7	3.9	4.4	4.5	4.8	3.8
P0 - cig sealed	6.6	5.8	6.2	6.5	6.9	5.5
P0 - tob sec	2.2	2.6	2.9	1.8	2.5	2.5
P0 - filter	4.4	3.2	3.3	4.7	4.4	3.0
Paper Citrate (%)	0.42	0.63	0.43	0.40	0.52	0.46

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ULTRA LIGHT KS

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ULTRA MENTHOL KS

	CARLTON ULT KS	KOOL DLX KS	MERIT ULT KS	NOM ULT KS	SALEM ULT KS	TRUE ULT KS
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TPM SMOKE ANALYSIS

Tar (mg/cig)	1.3	5.3	5.1	1.4	5.0	4.9
Tar/Puff	0.19	0.67	0.64	0.23	0.70	0.66
Nicotine (mg/cig)	0.19	0.53	0.47	0.22	0.53	0.50
Nic/Puff	0.03	0.07	0.06	0.04	0.07	0.07
CO (mg/cig)	1.8	5.9	5.2	2.2	6.1	5.1
Puffs (per cig)	6.7	7.9	8.0	6.2	7.1	7.4
Filter Eff. (%)	66.9	58.1	55.8	67.4	54.6	52.0
Ventilation (%)	75.9	52.3	55.2	74.8	51.0	62.1
T5 Tar (mg/cig)	16.3	26.5	25.8	17.0	22.5	26.9
CO/Tar	1.38	1.11	1.02	1.57	1.22	1.04
Tar/Nic	6.84	10.00	10.85	6.36	9.43	9.00

SMOKE MENTHOL

Puffs (per cig)	7.3	7.8	7.8	6.3	7.2	7.8
Menthol (mg/cig)	0.11	0.22	0.39	0.15	0.28	0.18
Menthol (mg/puff)	0.02	0.03	0.05	0.02	0.04	0.02

TOBACCO ANALYSIS

Moisture (%)	13.1	12.9	13.1	12.5	13.3	12.8
Glycerin (%)	1.77	2.28	1.82	0.60	1.63	2.58
PS (%)	0.85	0.69	1.39	1.66	0.99	1.15
Menthol (%)	1.20	0.71	0.86	1.88	0.69	0.49
Alkaloid (%)	2.21	2.39	2.19	2.65	2.38	2.51
Red. Sugar (%)	6.6	6.5	7.1	6.6	6.7	6.9
Total Sugar (%)	9.1	10.4	11.1	9.4	8.9	9.1
Nitrate (%)	1.49	1.18	1.28	1.55	1.48	1.55
Tobacco Ammonia (%)	0.14	0.13	0.28	0.19	0.22	0.22
PSD +9	44.8	47.4	44.0	34.8	46.7	40.0
PSD -14	19.8	23.5	21.4	25.0	18.8	26.1

CIGARETTE ANALYSIS

Cigarette wgt. (mg/cig)	811	938	896	778	901	964
Tobacco wgt. (mg/cig)	532	657	615	475	605	667
Non-tobacco wgt. (mg/cig)	279	281	281	303	296	297
Circum. (mm)	24.8	24.8	24.8	24.8	24.7	24.7
Hardness (as is)	2.08	1.89	1.95	2.00	1.96	1.97
Hardness (cor.)	2.20	2.05	2.08	2.28	2.01	2.16
Firmness (as is)	186	167	173	178	174	175
Firmness (cor.)	197	183	186	205	179	193
PO - cig open	4.4	5.0	4.4	4.5	4.8	2.5
PO - cig sealed	8.6	7.5	7.0	9.0	7.3	6.6
PO - tob sec	2.7	2.2	1.9	2.5	1.9	2.3
PO - filter	5.9	5.3	5.1	6.6	5.4	4.3
Paper Citrate (%)	0.85	0.45	0.38	0.68	1.59	0.70

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ULTRA LIGHT 100

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ULTI MENTHOL 100

	B&H	CARLTON	KOOL	MERIT	NOM	SALEM	VA SLIMS	TRIUMPH
	ULT	ULT	DLX	ULT	ULT	ULT	ULT	ULT
	100	100	ULT-100	100	100	100	100	100

TPM SMOKE ANALYSIS

Tar (mg/cig)	5.8	2.5	5.7	6.0	2.4	5.5	5.5	5.2
Tar/Puff	0.64	0.31	0.62	0.61	0.33	0.59	0.58	0.64
Nicotine (mg/cig)	0.52	0.28	0.60	0.59	0.29	0.54	0.53	0.57
Nic/Puff	0.06	0.03	0.07	0.06	0.04	0.06	0.06	0.07
CO (mg/cig)	6.1	2.5	5.9	6.8	2.6	6.0	5.1	5.7
Puffs (per cig)	9.0	8.1	9.2	9.9	7.3	9.4	9.5	8.1
Filter Eff. (%)	53.3	60.7	55.8	61.2	68.8	60.2	54.7	58.8
Ventilation (%)	53.6	75.6	54.4	57.9	73.0	57.6	58.9	51.8
TS Tar (mg/cig)	26.8	26.1	28.3	36.7	28.5	32.6	29.5	26.2
CO/Tar	1.05	1.00	1.04	1.13	1.08	1.09	0.93	1.10
Tar/Nic	11.15	8.93	9.50	10.17	8.28	10.19	10.38	9.12

SMOKE MENTHOL

Puffs (per cig)	9.0	7.9	9.3	10.2	7.7	9.8	9.1	8.1
Menthol (mg/cig)	0.46	0.2	0.38	0.43	0.29	0.34	0.39	0.27
Menthol (mg/puff)	0.05	0.03	0.04	0.04	0.04	0.04	0.04	0.03

TOBACCO ANALYSIS

Moisture (%)	13.5	12.4	14.0	12.3	11.6	12.2	13.5	12.3
Glycerin (%)	2.28	1.58	2.42	1.74	0.58	1.47	2.26	2.55
PG (%)	1.81	0.82	0.80	1.27	1.15	0.96	1.81	1.04
Menthol (%)	0.82	1.07	0.75	0.92	1.34	0.65	0.78	0.73
Alkaloid (%)	2.13	2.36	2.50	2.28	2.44	2.32	2.07	2.69
Red. Sugar (%)	7.8	5.9	8.1	6.7	6.5	9.6	7.1	7.5
Total Sugar (%)	12.8	8.1	11.5	10.9	9.4	12.3	12.3	9.4
Nitrate (%)	1.08	1.51	1.14	1.26	1.52	1.11	1.11	1.24
Tobacco Ammonia (%)	0.24	0.15	0.16	0.28	0.18	0.12	0.26	0.16
PSO +9	47.0	45.0	50.5	44.4	35.8	38.5	42.9	42.3
PSO -14	19.5	20.3	19.9	21.6	24.6	21.7	22.8	23.5

CIGARETTE ANALYSIS

Cigarette wgt. (mg/cig)	1012	927	1094	1054	908	1124	954	1010
Tobacco wgt. (mg/cig)	708	631	805	731	583	788	675	703
Non-tobacco wgt. (mg/cig)	304	295	289	322	325	336	279	307
Circum. (mm)	24.1	24.4	24.7	24.8	25.0	24.9	23.2	24.7
Hardness (as is)	1.97	1.73	2.23	1.81	1.77	1.9	1.99	2.19
Hardness (cor.)	1.96	2.04	2.08	2.14	2.31	2.27	1.98	2.51
Firmness (as is)	175	152	200	159	156	168	177	196
Firmness (cor.)	174	182	186	191	208	204	176	227
PD - cig open	4.7	3.8	4.6	4.5	3.7	4.6	4.3	4.9
PD - cig sealed	7.8	8.7	7.4	8.0	8.1	7.8	7.8	7.5
PD - tob sec	2.4	3.6	2.6	2.5	2.7	2.0	2.9	2.2
PD - filter	5.4	5.1	4.8	5.5	5.4	5.8	4.9	5.3
Paper Citrate (%)	2.01	1.51	0.74	0.39	1.66	1.59	0.51	1.73

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